```
Lys Ile Met Asn His Lys Asn Ser Leu Thr Phe Pro Asp Asp Asn Asp
    290                 295                 300
Ile Ser Lys Glu Ala Lys Asn Leu Ile Cys Ala Phe Leu Thr Asp Arg
305                 310                 315                 320
Glu Val Arg Leu Gly Arg Asn Gly Val Glu Glu Ile Lys Arg His Leu
                325                 330                 335
Phe Phe Lys Asn Asp Gln Trp Ala Trp Glu Thr Leu Arg Asp Thr Val
            340                 345                 350
Ala Pro Val Val Pro Asp Leu Ser Ser Asp Ile Asp Thr Ser Asn Phe
        355                 360                 365
Asp Asp Leu Glu Glu Asp Lys Gly Glu Glu Glu Thr Phe Pro Ile Pro
    370                 375                 380
Lys Ala Phe Val Gly Asn Gln Leu Pro Phe Val Gly Phe Thr Tyr Tyr
385                 390                 395                 400
Ser Asn Arg Arg Tyr Leu Ser Ser Ala Asn Pro Asn Asp Asn Arg Thr
                405                 410                 415
Ser Ser Asn Ala Asp Lys Ser Leu Gln Glu Ser Leu Gln Lys Thr Ile
            420                 425                 430
Tyr Lys Leu Glu Glu Gln Leu His Asn Glu Met Gln Leu Lys Asp Glu
        435                 440                 445
Met Glu Gln Lys Cys Arg Thr Ser Asn Ile Lys Leu Asp Lys Ile Met
    450                 455                 460
Lys Glu Leu Asp Glu Glu Gly Asn Gln Arg Arg Asn Leu Glu Ser Thr
465                 470                 475                 480
Val Ser Gln Ile Glu Lys Glu Lys Met Leu Leu Gln His Arg Ile Asn
                485                 490                 495
Glu Tyr Gln Arg Lys Ala Glu Gln Glu Asn Glu Lys Arg Arg Asn Val
            500                 505                 510
Glu Asn Glu Val Ser Thr Leu Lys Asp Gln Leu Glu Asp Leu Lys Lys
        515                 520                 525
Val Ser Gln Asn Ser Gln Leu Ala Asn Glu Lys Leu Ser Gln Leu Gln
    530                 535                 540
Lys Gln Leu Glu Glu Ala Asn Asp Leu Leu Arg Thr Glu Ser Asp Thr
545                 550                 555                 560
Ala Val Arg Leu Arg Lys Ser His Thr Glu Met Ser Lys Ser Ile Ser
                565                 570                 575
Gln Leu Glu Ser Leu Asn Arg Glu Leu Gln Glu Arg Asn Arg Ile Leu
            580                 585                 590
Glu Asn Ser Lys Ser Gln Thr Asp Lys Asp Tyr Tyr Gln Leu Gln Ala
        595                 600                 605
Ile Leu Glu Ala Glu Arg Arg Asp Arg Gly His Asp Ser Glu Met Ile
    610                 615                 620
Gly Asp Leu Gln Ala Arg Ile Thr Ser Leu Gln Glu Glu Val Lys His
625                 630                 635                 640
Leu Lys His Asn Leu Glu Lys Val Glu Gly Glu Arg Lys Glu Ala Gln
                645                 650                 655
Asp Met Leu Asn His Ser Glu Lys Glu Lys Asn Asn Leu Glu Ile Asp
            660                 665                 670
Leu Asn Tyr Lys Leu Lys Ser Leu Gln Gln Arg Leu Glu Gln Glu Val
        675                 680                 685
Asn Glu His Lys Val Thr Lys Ala Arg Leu Thr Asp Lys His Gln Ser
    690                 695                 700
Ile Glu Glu Ala Lys Ser Val Ala Met Cys Glu Met Glu Lys Lys Leu
705                 710                 715                 720
Lys Glu Glu Arg Glu Ala Arg Glu Lys Ala Glu Asn Arg Val Val Gln
```

```
                725                 730                 735
Ile Glu Lys Gln Cys Ser Met Leu Asp Val Asp Leu Lys Gln Ser Gln
            740                 745                 750
Gln Lys Leu Glu His Leu Thr Gly Asn Lys Glu Arg Met Glu Asp Glu
        755                 760                 765
Val Lys Asn Leu Thr Leu Gln Leu Glu Gln Glu Ser Asn Lys Arg Leu
    770                 775                 780
Leu Leu Gln Asn Glu Leu Lys Thr Gln Ala Phe Glu Ala Asp Asn Leu
785                 790                 795                 800
Lys Gly Leu Glu Lys Gln Met Lys Gln Glu Ile Asn Thr Leu Leu Glu
                805                 810                 815
Ala Lys Arg Leu Leu Glu Phe Glu Leu Ala Gln Leu Thr Lys Gln Tyr
            820                 825                 830
Arg Gly Asn Glu Gly Gln Met Arg Glu Leu Gln Asp Gln Leu Glu Ala
        835                 840                 845
Glu Gln Tyr Phe Ser Thr Leu Tyr Lys Thr Gln Val Lys Glu Leu Lys
    850                 855                 860
Glu Glu Ile Glu Glu Lys Asn Arg Glu Asn Leu Lys Lys Ile Gln Glu
865                 870                 875                 880
Leu Gln Asn Glu Lys Glu Thr Leu Ala Thr Gln Leu Asp Leu Ala Glu
                885                 890                 895
Thr Lys Ala Glu Ser Glu Gln Leu Ala Arg Gly Leu Leu Glu Glu Gln
            900                 905                 910
Tyr Phe Glu Leu Thr Gln Glu Ser Lys Lys Ala Ala Ser Arg Asn Arg
        915                 920                 925
Gln Glu Ile Thr Asp Lys Asp His Thr Val Ser Arg Leu Glu Glu Ala
    930                 935                 940
Asn Ser Met Leu Thr Lys Asp Ile Glu Ile Leu Arg Arg Glu Asn Glu
945                 950                 955                 960
Glu Leu Thr Glu Lys Met Lys Lys Ala Glu Glu Glu Tyr Lys Leu Glu
                965                 970                 975
Lys Glu Glu Glu Ile Ser Asn Leu Lys Ala Ala Phe Glu Lys Asn Ile
            980                 985                 990
Asn Thr Glu Arg Thr Leu Lys Thr Gln Ala Val Asn Lys Leu Ala Glu
        995                 1000                1005
Ile Met Asn Arg Lys Asp Phe Lys Ile Asp Arg Lys Lys Ala Asn Thr
    1010                1015                1020
Gln Asp Leu Arg Lys Lys Glu Lys Glu Asn Arg Lys Leu Gln Leu Glu
1025                1030                1035                104
Leu Asn Gln Glu Arg Glu Lys Phe Asn Gln Met Val Val Lys His Gln
                1045                1050                1055
Lys Glu Leu Asn Asp Met Gln Ala Gln Leu Val Glu Glu Cys Ala His
            1060                1065                1070
Arg Asn Glu Leu Gln Met Gln Leu Ala Ser Lys Glu Ser Asp Ile Glu
        1075                1080                1085
Gln Leu Arg Ala Lys Leu Leu Asp Leu Ser Asp Ser Thr Ser Val Ala
    1090                1095                1100
Ser Phe Pro Ser Ala Asp Glu Thr Asp Gly Asn Leu Pro Glu Ser Arg
1105                1110                1115                112
Ile Glu Gly Trp Leu Ser Val Pro Asn Arg Gly Asn Ile Lys Arg Tyr
                1125                1130                1135
Gly Trp Lys Lys Gln Tyr Val Val Val Ser Ser Lys Lys Ile Leu Phe
            1140                1145                1150
Tyr Asn Asp Glu Gln Asp Lys Glu Gln Ser Asn Pro Ser Met Val Leu
        1155                1160                1165
```

```
Asp Ile Asp Lys Leu Phe His Val Arg Pro Val Thr Gln Gly Asp Val
    1170                1175                1180
Tyr Arg Ala Glu Thr Glu Glu Ile Pro Lys Ile Phe Gln Ile Leu Tyr
1185                1190                1195                120
Ala Asn Glu Gly Glu Cys Arg Lys Asp Val Glu Met Glu Pro Val Gln
                1205                1210                1215
Gln Ala Glu Lys Thr Asn Phe Gln Asn His Lys Gly His Glu Phe Ile
            1220                1225                1230
Pro Thr Leu Tyr His Phe Pro Ala Asn Cys Asp Ala Cys Ala Lys Pro
        1235                1240                1245
Leu Trp His Val Phe Lys Pro Pro Pro Ala Leu Glu Cys Arg Arg Cys
    1250                1255                1260
His Val Lys Cys His Arg Asp His Leu Asp Lys Lys Glu Asp Leu Ile
1265                1270                1275                128
Cys Pro Cys Lys Val Ser Tyr Asp Val Thr Ser Ala Arg Asp Met Leu
                1285                1290                1295
Leu Leu Ala Cys Ser Gln Asp Glu Gln Lys Lys Trp Val Thr His Leu
            1300                1305                1310
Val Lys Lys Ile Pro Lys Asn Pro Pro Ser Gly Phe Val Arg Ala Ser
        1315                1320                1325
Pro Arg Thr Leu Ser Thr Arg Ser Thr Ala Asn Gln Ser Phe Arg Lys
    1330                1335                1340
Val Val Lys Asn Thr Ser Gly Lys Thr Ser
1345                1350
```

<210> 159
<211> 683
<212> DNA
<213> Homo Sapiens

<400> 159

```
acaagctgga gttcgagcct gacagtgagg acaagatctc ggactgtgag gaaggattga      60
gtaatgtggc acttgaatgc agtgagccaa gcacaagtgt atctgcttat gaccagttga     120
aggcaccggc atcccctggt gctggaaacc cacctgggac cccaaaggga aagagagagc     180
tgatgagcaa tggcccaggt tccattattg gtgctaaagc tgggaagaat tctggcaaaa     240
agaagggcct taacaatgaa ctgaacaacc ttccagtaat ctccaacatg acggctgcgt     300
tagacagttg ctcggcagca gacggcagtt tggctgctga gatgcctaaa ctggaagcag     360
aaggattaat tgacaagaaa aatttaggag ataaagaaaa gggcaaaaaa gctaacaact     420
gcaaaacgga caaaaacctc tctaaactga aaagtgcccg gcccattgcc cctgccccag     480
cccccactcc cccgcagcta atcgctatac ccactgcaac ctttacaacg accaccactg     540
ggacaatacc cggactgccc tccctcacaa caactgttgt tcaggctaca ccaaagagtc     600
ctccgttaaa acccattcaa ccaaagccca caattatggg agagcccatc accgtgaacc     660
cagctctggt gtcactcaaa gac                                             683
```

<210> 160
<211> 227
<212> PRT
<213> Homo Sapiens

<400> 160

```
Lys Leu Glu Phe Glu Pro Asp Ser Glu Asp Lys Ile Ser Asp Cys Glu
 1               5                  10                  15
Glu Gly Leu Ser Asn Val Ala Leu Glu Cys Ser Glu Pro Ser Thr Ser
            20                  25                  30
Val Ser Ala Tyr Asp Gln Leu Lys Ala Pro Ala Ser Pro Gly Ala Gly
```

```
        35                  40                  45
Asn Pro Pro Gly Thr Pro Lys Gly Lys Arg Glu Leu Met Ser Asn Gly
    50                  55                  60
Pro Gly Ser Ile Ile Gly Ala Lys Ala Gly Lys Asn Ser Gly Lys Lys
65                  70                  75                  80
Lys Gly Leu Asn Asn Glu Leu Asn Asn Leu Pro Val Ile Ser Asn Met
                85                  90                  95
Thr Ala Ala Leu Asp Ser Cys Ser Ala Ala Asp Gly Ser Leu Ala Ala
            100                 105                 110
Glu Met Pro Lys Leu Glu Ala Glu Gly Leu Ile Asp Lys Lys Asn Leu
        115                 120                 125
Gly Asp Lys Glu Lys Gly Lys Lys Ala Asn Asn Cys Lys Thr Asp Lys
    130                 135                 140
Asn Leu Ser Lys Leu Lys Ser Ala Arg Pro Ile Ala Pro Ala Pro Ala
145                 150                 155                 160
Pro Thr Pro Pro Gln Leu Ile Ala Ile Pro Thr Ala Thr Phe Thr Thr
                165                 170                 175
Thr Thr Thr Gly Thr Ile Pro Gly Leu Pro Ser Leu Thr Thr Thr Val
            180                 185                 190
Val Gln Ala Thr Pro Lys Ser Pro Pro Leu Lys Pro Ile Gln Pro Lys
        195                 200                 205
Pro Thr Ile Met Gly Glu Pro Ile Thr Val Asn Pro Ala Leu Val Ser
    210                 215                 220
Leu Lys Asp
225
```

<210> 161
<211> 662
<212> DNA
<213> Homo Sapiens

<400> 161

```
acccacagca gttgcacttg ctgagcaggc agcttgagga cccaaatggt agcttttcta      60
acgctgagat gagtgaactg agtgtggcac agaaaccaga aaaacttttg gagcgctgca     120
agtactggcc tgcttgtaaa aatggggatg agtgtgccta ccatcacccc atctcaccct     180
gcaaagcctt ccccaattgt aaatttgctg aaaaatgttt gtttgttcac ccaaattgta     240
aatatgatgc aaagtgtact aaaccagatt gtcccttcac tcatgtgagt agaagaattc     300
cagtactgtc tccaaaacca gttgcaccac cagcaccacc ttccagtagt cagctctgcc     360
gttacttccc tgcttgtaag aagatggaat gtcccttcta tcatccaaaa cattgtaggt     420
ttaacactca atgtacaaga ccggactgca cattctacca tcccaccatt aatgtcccac     480
cacgacatgc cttgaaatgg attcgacctc aaaccagcga atagcaccca gtcctgcctg     540
gcagaagatc atgcagtttg gaagttttca tgtctgatga aagatctcta cagaacttgt     600
caaatctttg aaacttggaa tatattgctt tcataatatg aaggtttatt ggctatctaa     660
aa                                                                    662
```

<210> 162
<211> 173
<212> PRT
<213> Homo Sapiens

<400> 162

```
Pro Gln Gln Leu His Leu Leu Ser Arg Gln Leu Glu Asp Pro Asn Gly
 1               5                  10                  15
Ser Phe Ser Asn Ala Glu Met Ser Glu Leu Ser Val Ala Gln Lys Pro
            20                  25                  30
```

```
Glu Lys Leu Leu Glu Arg Cys Lys Tyr Trp Pro Ala Cys Lys Asn Gly
        35                  40                  45
Asp Glu Cys Ala Tyr His His Pro Ile Ser Pro Cys Lys Ala Phe Pro
    50                  55                  60
Asn Cys Lys Phe Ala Glu Lys Cys Leu Phe Val His Pro Asn Cys Lys
65                  70                  75                  80
Tyr Asp Ala Lys Cys Thr Lys Pro Asp Cys Pro Phe Thr His Val Ser
                85                  90                  95
Arg Arg Ile Pro Val Leu Ser Pro Lys Pro Val Ala Pro Pro Ala Pro
            100                 105                 110
Pro Ser Ser Ser Gln Leu Cys Arg Tyr Phe Pro Ala Cys Lys Lys Met
        115                 120                 125
Glu Cys Pro Phe Tyr His Pro Lys His Cys Arg Phe Asn Thr Gln Cys
    130                 135                 140
Thr Arg Pro Asp Cys Thr Phe Tyr His Pro Thr Ile Asn Val Pro Pro
145                 150                 155                 160
Arg His Ala Leu Lys Trp Ile Arg Pro Gln Thr Ser Glu
                165                 170
```

<210> 163
<211> 2912
<212> DNA
<213> Homo Sapiens

<400> 163

```
cagttgcttc agcgtcccgg tgtggctgtg ccgttggtcc tgtgcggtca cttagccaag      60
atgcctgagg aaacccagac ccaagaccaa ccgatggagg aggaggaggt tgagacgttc     120
gcctttcagg cagaaattgc ccagttgatg tcattgatca tcaatacttt ctactcgaac     180
aaagagatct ttctgagaga gctcatttca aattcatcag atgcattgga caaaatccgg     240
tatgaaactt tgacagatcc cagtaaatta gactctggga aagagctgca tattaacctt     300
ataccgaaca aacaagatcg aactctcact attgtggata ctggaattgg aatgaccaag     360
gctgacttga tcaataacct tggtactatc gccaagtctg ggaccaaagc gttcatggaa     420
gctttgcagg ctggtgcaga tatctctatg attggccagt tcggtgttgg tttttattct     480
gcttatttgg ttgctgagaa agtaactgtg atcaccaaac ataacgatga tgagcagtac     540
gcttgggagt cctcagcagg gggatcattc acagtgagga cagacacagg tgaacctatg     600
ggtcgtggaa caaaagttat cctacacctg aaagaagacc aaactgagta cttggaggaa     660
cgaagaataa aggagattgt gaagaaacat tctcagttta ttggatatcc cattactctt     720
tttgtggaga aggaacgtga taaagaagta agcgatgatg aggctgaaga aaaggaagac     780
aaagaagaag aaaaagaaaa agaagagaaa gagtcggaag acaaacctga aattgaagat     840
gttggttctg atgaggaaga agaaaagaag gatggtgaca agaagaagaa gaagaagatt     900
aaggaaaagt acatcgatca agaagagctc aacaaaacaa agcccatctg gaccagaaat     960
cccgacgata ttactaatga ggagtacgga gaattctata agagcttgac caatgactgg    1020
gaagatcact tggcagtgaa gcatttttca gttgaaggac agttggaatt cagagccctt    1080
ctatttgtcc cacgacgtgc tccttttgat ctgtttgaaa acagaaagaa aaagaacaat    1140
atcaaattgt atgtacgcag agttttcatc atggataact gtgaggagct aatccctgaa    1200
tatctgaact tcattagagg ggtggtagac tcggaggatc tccctctaaa catatcccgt    1260
gagatgttgc aacaaagcaa aattttgaaa gttatcagga agaatttggt caaaaaatgc    1320
ttagaactct ttactgaact ggcggaagat aaagagaact acaagaaatt ctatgagcag    1380
ttctctaaaa acataaagct tggaatacac gaagactctc aaaatcggaa gaagctttca    1440
gagctgttaa ggtactacac atctgcctct ggtgatgaga tggtttctct caaggactac    1500
tgcaccagaa tgaaggagaa ccagaaacat atctattata tcacaggtga gaccaaggac    1560
caggtagcta actcagcctt tgtggaacgt cttcggaaac atggcttaga agtgatctat    1620
atgattgagc ccattgatga gtactgtgtc caacagctga aggaatttga ggggaagact    1680
ttagtgtcag tcaccaaaga aggcctggaa cttccagagg atgaagaaga gaaaaagaag    1740
caggaagaga aaaaaacaaa gtttgagaac ctctgcaaaa tcatgaaaga catattggag    1800
```

```
aaaaaagttg aaaaggtggt tgtgtcaaac cgattggtga catctccatg ctgtattgtc    1860
acaagcacat atggctggac agcaaacatg gagagaatca tgaaagctca agccctaaga    1920
gacaactcaa caatgggtta catggcagca aagaaacacc tggagataaa ccctgaccat    1980
tccattattg agaccttaag gcaaaaggca gaggctgata agaacgacaa gtctgtgaag    2040
gatctggtca tcttgcttta tgaaactgcg ctcctgtctt ctggcttcag tctggaagat    2100
ccccagacac atgctaacag gatctacagg atgatcaaac ttggtctggg tattgatgaa    2160
gatgacccta ctgctgatga taccagtgct gctgtaactg aagaaatgcc acccttgaa     2220
ggagatgacg acacatcacg catggaagaa gtagactaat ctctggctga gggatgactt    2280
acctgttcag tactctacaa ttcctctgat aatatatttt caaggatgtt tttctttatt    2340
tttgttaata ttaaaaagtc tgtatggcat gacaactact ttaaggggaa gataagattt    2400
ctgtctacta agtgatgctg tgatacctta ggcactaaag cagagctagt aatgcttttt    2460
gagtttcatg ttggttcttt cacagatggg gtaacgtgca ctgtaagacg tatgtaacat    2520
gatgttaact ttgtgtggtc taaagtgttt agctgtcaag ccggatgcct aagtagacca    2580
aatcttgtta ttgaagtgtt ctgagctgta tcttgatgtt tagaaaagta ttcgttacat    2640
cttgtaggat ctacttttg aacttttcat tccctgtagt tgacaattct gcatgtacta     2700
gtcctctaga aataggttaa actgaagcaa cttgatggaa ggatctctcc acagggcttg    2760
ttttccaaag aaaagtattg tttggaggag caaagttaaa agcctaccta agcatatcgt    2820
aaagctgttc aaatactcga gcccagtctt gtggatggaa atgtagtgct cgagtcacat    2880
tctgcttaaa gttgtaacaa atacagatga gt                                  2912
```

<210> 164
<211> 732
<212> PRT
<213> Homo Sapiens

<400> 164

```
Met Pro Glu Glu Thr Gln Thr Gln Asp Gln Pro Met Glu Glu Glu Glu
 1               5                  10                  15
Val Glu Thr Phe Ala Phe Gln Ala Glu Ile Ala Gln Leu Met Ser Leu
            20                  25                  30
Ile Ile Asn Thr Phe Tyr Ser Asn Lys Glu Ile Phe Leu Arg Glu Leu
        35                  40                  45
Ile Ser Asn Ser Ser Asp Ala Leu Asp Lys Ile Arg Tyr Glu Thr Leu
    50                  55                  60
Thr Asp Pro Ser Lys Leu Asp Ser Gly Lys Glu Leu His Ile Asn Leu
65                  70                  75                  80
Ile Pro Asn Lys Gln Asp Arg Thr Leu Thr Ile Val Asp Thr Gly Ile
                85                  90                  95
Gly Met Thr Lys Ala Asp Leu Ile Asn Asn Leu Gly Thr Ile Ala Lys
            100                 105                 110
Ser Gly Thr Lys Ala Phe Met Glu Ala Leu Gln Ala Gly Ala Asp Ile
        115                 120                 125
Ser Met Ile Gly Gln Phe Gly Val Gly Phe Tyr Ser Ala Tyr Leu Val
    130                 135                 140
Ala Glu Lys Val Thr Val Ile Thr Lys His Asn Asp Asp Glu Gln Tyr
145                 150                 155                 160
Ala Trp Glu Ser Ser Ala Gly Gly Ser Phe Thr Val Arg Thr Asp Thr
                165                 170                 175
Gly Glu Pro Met Gly Arg Gly Thr Lys Val Ile Leu His Leu Lys Glu
            180                 185                 190
Asp Gln Thr Glu Tyr Leu Glu Glu Arg Arg Ile Lys Glu Ile Val Lys
        195                 200                 205
Lys His Ser Gln Phe Ile Gly Tyr Pro Ile Thr Leu Phe Val Glu Lys
    210                 215                 220
Glu Arg Asp Lys Glu Val Ser Asp Asp Glu Ala Glu Glu Lys Glu Asp
```

```
225                 230                 235                 240
Lys Glu Glu Glu Lys Glu Lys Glu Glu Lys Glu Ser Glu Asp Lys Pro
                245                 250                 255
Glu Ile Glu Asp Val Gly Ser Asp Glu Glu Glu Glu Lys Lys Asp Gly
            260                 265                 270
Asp Lys Lys Lys Lys Lys Lys Ile Lys Glu Lys Tyr Ile Asp Gln Glu
        275                 280                 285
Glu Leu Asn Lys Thr Lys Pro Ile Trp Thr Arg Asn Pro Asp Asp Ile
    290                 295                 300
Thr Asn Glu Glu Tyr Gly Glu Phe Tyr Lys Ser Leu Thr Asn Asp Trp
305                 310                 315                 320
Glu Asp His Leu Ala Val Lys His Phe Ser Val Glu Gly Gln Leu Glu
                325                 330                 335
Phe Arg Ala Leu Leu Phe Val Pro Arg Arg Ala Pro Phe Asp Leu Phe
            340                 345                 350
Glu Asn Arg Lys Lys Lys Asn Asn Ile Lys Leu Tyr Val Arg Arg Val
        355                 360                 365
Phe Ile Met Asp Asn Cys Glu Glu Leu Ile Pro Glu Tyr Leu Asn Phe
    370                 375                 380
Ile Arg Gly Val Val Asp Ser Glu Asp Leu Pro Leu Asn Ile Ser Arg
385                 390                 395                 400
Glu Met Leu Gln Gln Ser Lys Ile Leu Lys Val Ile Arg Lys Asn Leu
                405                 410                 415
Val Lys Lys Cys Leu Glu Leu Phe Thr Glu Leu Ala Glu Asp Lys Glu
            420                 425                 430
Asn Tyr Lys Lys Phe Tyr Glu Gln Phe Ser Lys Asn Ile Lys Leu Gly
        435                 440                 445
Ile His Glu Asp Ser Gln Asn Arg Lys Lys Leu Ser Glu Leu Leu Arg
    450                 455                 460
Tyr Tyr Thr Ser Ala Ser Gly Asp Glu Met Val Ser Leu Lys Asp Tyr
465                 470                 475                 480
Cys Thr Arg Met Lys Glu Asn Gln Lys His Ile Tyr Tyr Ile Thr Gly
                485                 490                 495
Glu Thr Lys Asp Gln Val Ala Asn Ser Ala Phe Val Glu Arg Leu Arg
            500                 505                 510
Lys His Gly Leu Glu Val Ile Tyr Met Ile Glu Pro Ile Asp Glu Tyr
        515                 520                 525
Cys Val Gln Gln Leu Lys Glu Phe Glu Gly Lys Thr Leu Val Ser Val
    530                 535                 540
Thr Lys Glu Gly Leu Glu Leu Pro Glu Asp Glu Glu Glu Lys Lys Lys
545                 550                 555                 560
Gln Glu Glu Lys Lys Thr Lys Phe Glu Asn Leu Cys Lys Ile Met Lys
                565                 570                 575
Asp Ile Leu Glu Lys Lys Val Glu Lys Val Val Val Ser Asn Arg Leu
            580                 585                 590
Val Thr Ser Pro Cys Cys Ile Val Thr Ser Thr Tyr Gly Trp Thr Ala
        595                 600                 605
Asn Met Glu Arg Ile Met Lys Ala Gln Ala Leu Arg Asp Asn Ser Thr
    610                 615                 620
Met Gly Tyr Met Ala Ala Lys Lys His Leu Glu Ile Asn Pro Asp His
625                 630                 635                 640
Ser Ile Ile Glu Thr Leu Arg Gln Lys Ala Glu Ala Asp Lys Asn Asp
                645                 650                 655
Lys Ser Val Lys Asp Leu Val Ile Leu Leu Tyr Glu Thr Ala Leu Leu
            660                 665                 670
```

```
Ser Ser Gly Phe Ser Leu Glu Asp Pro Gln Thr His Ala Asn Arg Ile
        675                 680                 685
Tyr Arg Met Ile Lys Leu Gly Leu Gly Ile Asp Glu Asp Asp Pro Thr
    690                 695                 700
Ala Asp Asp Thr Ser Ala Ala Val Thr Glu Glu Met Pro Pro Leu Glu
705                 710                 715                 720
Gly Asp Asp Asp Thr Ser Arg Met Glu Glu Val Asp
                725                 730
```

<210> 165
<211> 790
<212> DNA
<213> Homo Sapiens

<400> 165

```
ccgactcaga aatggcggcc tccatgttct acggcaggct agtggccgtg gccacccttc      60
ggaaccaccg gcctcggacg gcccagcggg ctgctgctca ggttctggga agttctggat     120
tgtttaataa ccatggactc caagtacagc agcaacagca aaggaatctc tcactacatg     180
aatacatgag tatggaatta ttgcaagaag ctggtgtctc cgttcccaaa ggatatgtgg     240
caaagtcacc agatgaagct tatgcaattg ccaaaaaatt aggttcaaaa gatgtcgtga     300
taaaggcaca ggttttagct ggtggtagag gaaaaggaac atttgaaagt ggcctcaaag     360
gaggagtgaa gatagttttc tctccagaag aagcaaaagc tgtttcttca caaatgattg     420
ggaaaaaatt gtttaccaag caaacgggag aaaagggcag aatatgcaat caagtattgg     480
tctgtgagcg aaaatatccc aggagagaat actactttgc aataacaatg gaaaggtcat     540
ttcaaggtcc tgtattaata ggaagttcac atggtggtgt caacattgaa gatgttgctg     600
ctgagtctcc tgaagcaata attaaagaac ctattgatat tgaagaaggc atcaaaaagg     660
aacaagctct tcagcttgca cagaagaatg ggatttcccc taatattgng ggaatcagca     720
gcaggaaaac atggtcaagc tttacagncn ttttcttgaa atacgatgca acccttgata     780
ggaaattaaa                                                            790
```

<210> 166
<211> 259
<212> PRT
<213> Homo Sapiens

<400> 166

```
Asp Ser Glu Met Ala Ala Ser Met Phe Tyr Gly Arg Leu Val Ala Val
 1               5                  10                  15
Ala Thr Leu Arg Asn His Arg Pro Arg Thr Ala Gln Arg Ala Ala Ala
            20                  25                  30
Gln Val Leu Gly Ser Ser Gly Leu Phe Asn Asn His Gly Leu Gln Val
        35                  40                  45
Gln Gln Gln Gln Gln Arg Asn Leu Ser Leu His Glu Tyr Met Ser Met
    50                  55                  60
Glu Leu Leu Gln Glu Ala Gly Val Ser Val Pro Lys Gly Tyr Val Ala
65                  70                  75                  80
Lys Ser Pro Asp Glu Ala Tyr Ala Ile Ala Lys Lys Leu Gly Ser Lys
                85                  90                  95
Asp Val Val Ile Lys Ala Gln Val Leu Ala Gly Gly Arg Gly Lys Gly
            100                 105                 110
Thr Phe Glu Ser Gly Leu Lys Gly Gly Val Lys Ile Val Phe Ser Pro
        115                 120                 125
Glu Glu Ala Lys Ala Val Ser Ser Gln Met Ile Gly Lys Lys Leu Phe
    130                 135                 140
Thr Lys Gln Thr Gly Glu Lys Gly Arg Ile Cys Asn Gln Val Leu Val
```

```
145                 150                 155                 160
Cys Glu Arg Lys Tyr Pro Arg Arg Glu Tyr Tyr Phe Ala Ile Thr Met
                165                 170                 175
Glu Arg Ser Phe Gln Gly Pro Val Leu Ile Gly Ser Ser His Gly Gly
            180                 185                 190
Val Asn Ile Glu Asp Val Ala Ala Glu Ser Pro Glu Ala Ile Ile Lys
        195                 200                 205
Glu Pro Ile Asp Ile Glu Glu Gly Ile Lys Lys Glu Gln Ala Leu Gln
    210                 215                 220
Leu Ala Gln Lys Asn Gly Ile Ser Pro Asn Ile Gly Ile Ser Ser Arg
225                 230                 235                 240
Lys Thr Trp Ser Ser Phe Thr Phe Leu Lys Tyr Asp Ala Thr Leu Asp
                245                 250                 255
Arg Lys Leu
```

<210> 167
<211> 5307
<212> DNA
<213> Homo Sapiens

<400> 167

```
gaataacagt taagttttgg ggagtaaaaa ctgtttcaat ttttgactgt gttgggggtt      60
ggtgctccta atccctgtgt tgttaaaggg tcgactatat tgtatttttg aaaattgcta     120
gagagtggac gtaaagtgtt ctcactaaac aaattataac tatgtgaggt agtgcatata     180
ttaagtagct agatttggtc attccacaat gtatatgtac ttcaaaacat catgttgtac     240
atgagaaaca cagttttatc tgttagtcag ttttaaaaat aaaaaatatt ccaactagaa     300
actctgttgt agtttttgaa attacaactt ggaggctttg aggaactgat tagaagtctc     360
ctttctgttt caggctttca tatccaaacc atagatcttt agaagtaaca tctgttaatt     420
aattattaat aaatagtttg agtctttatt aattcatgga taacttgacc attttctctc     480
tccttttgct tagataatcc cagatcatgg ccgggcacag tagctcacgc ctgtattccc     540
agcagtttgg gaggccgagg caggcagatc acttgaactc aggagtttga gaccagcttg     600
ggcaacatgg caaaaccctg tctctattaa aaatacaaaa attagctggg catggtagtg     660
catgcctgta gtcccagcta cctgggaggc tgaggtggga ggatcgcttg agcctgggag     720
gttgaggctt ctgtgcgcga tgattgctcc agtgatcacg ccattgcact ccagcctggg     780
tgacagagtg agaccctgtc tccaaaaaaa aaaaaaatta agcaagtagc agttacaaga     840
ccaaaagtta ttttcctttt ttttttttctc tataaaattg cccatttgga ccaaatctag     900
ttataactta tttcagtgtc attaagaaag ttgatgaata agtcatatta ctcagatgtt     960
agtagctatg catttattaa tagttttatt tataagtatt tagtttcact ctgttgcaga    1020
ctattttatg ctaaaattag ctaaagccaa attactattt cttaaaacat atttttttact    1080
ttttttttttt ttttaaatat tattaggtac ttcttgcaag ggatatgcat tagcacatac    1140
tcaagaaggg gaagaaaaga agcaaacttc tggtacatca aataccagag gatcaagacg    1200
aaaacctgca atgacaactc ctacaaggag gtctacacgt aacacaagag ctgaaacagc    1260
cagtcagtct cagagatccc caatatcaga caattctggg tgtgatgccc caggtaacag    1320
taatccatct ttaagtgttc cctcttcagc tgagtcagaa aagcaaacaa gacaggctcc    1380
aaaacggaag tctgtaagaa gaggaagaaa accaccttta ctgaaaaaga aacttcggag    1440
ctctgtagct gcccctgaaa aatcatcttc caatgattca gtagatgaag aaacagcaga    1500
atctgacaca tcacctgtgt tagaaaaaga gcaccaacca gatgtagaca gtagtaacat    1560
ttgtactgtg cagactcatg tagaaaacca gtctgctaat tgcttgaaaa gttgcaatga    1620
gcaaatagaa gaaagtgaga agcatactgc aaattatgat acagaggaaa gagtaggatc    1680
ttcatcttct gagtcttgtg ctcaagatct tcctgtgcta gttggtgagg aaggggaagt    1740
taaaaaactc gagaatacag gtatagaggc taatgttttg tgtttggaaa gtgagatttc    1800
tgaaaatatt cttgaaaaag gaggtgatcc attggaaaag caagaccaga tatctggact    1860
ttcacaatca gaggtaaaga cagatgtatg tacagttcat cttccaaatg attttcctac    1920
atgtttaaca tctgaaagca aagtgtacca acctgtatct tgtcccctaa gtgacttatc    1980
```

tgagaatgta gagtcagtgg ttaatgaaga aaaaataaca gagagttccc tagtagaaat 2040
tactgaacat aaagatttta cactaaaaac agaggagctt atagagagcc ccaagttaga 2100
atcttctgag ggtgaaatta tacagacagt ggacagacaa tctgttaaga gcccagaggt 2160
tcaattgctt gggcatgttg aaactgaaga tgtagaaata attgcaacat gtgatacttt 2220
tgggaatgaa gatttcaata atattcaaga ctctgaaaat aacttactaa aaaataatct 2280
tctgaacacc aaattggaaa aatctttaga agaaaagaat gaatcgctga ccgaacatcc 2340
tagatctaca gagttgccta aaacacacat tgaacagatt cagaagcatt ttagtgagga 2400
caacaatgaa atgataccta tggagtgtga ttcattttgc agtgaccaaa atgaatctga 2460
agttgaacca tctgtaaatg ctgatcttaa acaaatgaat gaaaattctg tgacacactg 2520
ttctgaaaat aatatgccgt cttctgatct tgcggatgaa aaggttgaaa ctgtttctca 2580
accatctgaa agcccaaaag ataccataga taaaaccaaa aagcctcgta ctcgaagatc 2640
tagatttcat tctccatcta caacttggtc acccaacaaa gacactccac aagaaaagaa 2700
gcggccccag tctccatctc ccagaagaga aactgggaaa gaaagcagga agtctcaatc 2760
accatctcct aagaatgagt cagccagagg ccggaaaaaa tcccgttctc agtccccaaa 2820
aaaggatatt gcaagagaaa ggaggcaatc tcagtctcgg tctccaaaaa gggatactac 2880
tagggaaagc agaagatctg aatcactgtc cccaagaaga gaaacttcta gagagaacaa 2940
aagatctcag ccaagagtga aagattcttc cccaggagaa aaatccaggt cccagagcag 3000
agaacgagaa agtgatagag atgggcagag gagagagaga gaaaggagaa ccagaaagtg 3060
gtctaggtcc agatctcatt ctaggtcccc ctcaagatgt agaacaaaaa gtaagagttc 3120
atcatttggt agaattgaca gagatagtta ctctccccgg tggaagggaa gatgggcaaa 3180
tgatggttgg agatgtccac gaggaaatga tcggtacaga aagaatgacc cagagaaaca 3240
gaatgaaaat acaagaaaag aaaaaaatga catccatcta gatgctgatg atccaaattc 3300
tgctgacaaa catagaaatg actgtcccaa ttggataaca gaaaaaataa actctgggcc 3360
tgatccaaga accagaaatc cagaaaagtt gaaagagtct cattgggaag aaaatagaaa 3420
tgaaaattca ggaaattctt ggaataaaaa ctttggttct ggttgggtat ctaaccgtgg 3480
tagaggcaga ggcaaccgtg gcagaggcac ttacagaagt agttttgcct ataaagatca 3540
gaatgaaaat cggtggcaaa atcgaaaacc cctctcaggg aattcaaaca gttcagggag 3600
tgaatctttc aagtttgtgg aacagcaatc ctataagcga aaaagtgaac aggagttctc 3660
atttgataca ccagcagata gatctggatg gacatctgca tccagctggg ccgtgagaaa 3720
gactttgcca gcagatgtac aaaactacta ctcacgacga ggcagaaatt cttcaggtcc 3780
acagtctgga tggatgaaac aagaggagga aacatctgga caggattcta gcctaaaaga 3840
ccaaacaaac cagcaagttg atggttctca gctacctata aatatgatgc aaccgcaaat 3900
gaatgtaatg cagcaacaaa tgaatgcaca acaccagcct atgaatatct tcccatatcc 3960
agtgggtgtt catgctcctt tgatgaacat ccaacgcaat ccatttaaca ttcatcctca 4020
gctacccttg catctccaca caggagtgcc cctcatgcag gtagccactc ctaccagtgt 4080
atctcaggga ctaccaccac caccaccccc tcccccacca tcccaacaag tcaactacat 4140
tgcttcacaa ccagatggaa agcaattgca gggtattcct agttcttctc atgtaagtaa 4200
taacatgagt acaccagttt tgcctgctcc gacagcagcc ccaggaaata cgggaatggt 4260
tcagggacca agttctggta atacttcgtc atcaagtcac agcaaagcct ctaatgctgc 4320
tgtaaaattg gcagaaagca aagtaagtgt tgcagtggaa gccagcgcag atagctcgaa 4380
gacagacaag aaattgcaaa ttcaagaaaa agcagcacaa gaggtaaaat tggccatcaa 4440
gccatttttac caaaataaag atatcaccaa ggaagaatat aaagaaattg tacggaaagc 4500
agtagataaa gtttgtcata gtaagagtgg agaagtaaat tctactaaag tggcaaatct 4560
ggttaaagcc tatgtagaca aatacaaata ttcacggaag gggagccaaa agaaaactct 4620
ggaagaacct gtgtctactg aaaaaaacat aggctgaaat ggggaacgct gtcaaggaca 4680
ttatcaggat atctgcaaag tgcaatttca acatgtacca ttaactgaaa atcatacata 4740
actgtgattg aaatttggtt ttgataaaat tatttttta acataggata tgatgttttg 4800
ttctaaataa atataggtct gcactgcaac ttctgtatcc ttccttcccc tccaccctcc 4860
cccacaaaat tcaagggaaa gtaaagggtt taaaggaatg tgcatcttta ctaggactgt 4920
gttatagtgt ggatactgga aaatgtatag ctttttgatt agggcaatgg agtgcataaa 4980
ttagaaactt ctaagtgcac tggttttcaa agagatatat ataatgcatt tattctgtca 5040
ggttaaaata taaagtatga tctttatgat tttttccctc taattataga aagttaaata 5100
atgtattacc atgaaaaatg tttctaatat taaatagaac atatcagttg caaagttcct 5160
aatgtgtatt tttaaagcac atatctgaat aaattgccta gatagaaaaa aaattatcac 5220
gagtaaaatt tagtgttcaa aacattgaaa cactcttcac ctattgtatg accaaataaa 5280

ggttatgctg cttgttacgc gaaggcc 5307

<210> 168
<211> 1148
<212> PRT
<213> Homo Sapiens

<400> 168

```
Met Thr Thr Pro Thr Arg Arg Ser Thr Arg Asn Thr Arg Ala Glu Thr
 1               5                  10                  15
Ala Ser Gln Ser Gln Arg Ser Pro Ile Ser Asp Asn Ser Gly Cys Asp
            20                  25                  30
Ala Pro Gly Asn Ser Asn Pro Ser Leu Ser Val Pro Ser Ser Ala Glu
        35                  40                  45
Ser Glu Lys Gln Thr Arg Gln Ala Pro Lys Arg Lys Ser Val Arg Arg
    50                  55                  60
Gly Arg Lys Pro Pro Leu Leu Lys Lys Lys Leu Arg Ser Ser Val Ala
65                  70                  75                  80
Ala Pro Glu Lys Ser Ser Ser Asn Asp Ser Val Asp Glu Glu Thr Ala
                85                  90                  95
Glu Ser Asp Thr Ser Pro Val Leu Glu Lys Glu His Gln Pro Asp Val
            100                 105                 110
Asp Ser Ser Asn Ile Cys Thr Val Gln Thr His Val Glu Asn Gln Ser
        115                 120                 125
Ala Asn Cys Leu Lys Ser Cys Asn Glu Gln Ile Glu Glu Ser Glu Lys
    130                 135                 140
His Thr Ala Asn Tyr Asp Thr Glu Glu Arg Val Gly Ser Ser Ser Ser
145                 150                 155                 160
Glu Ser Cys Ala Gln Asp Leu Pro Val Leu Val Gly Glu Glu Gly Glu
                165                 170                 175
Val Lys Lys Leu Glu Asn Thr Gly Ile Glu Ala Asn Val Leu Cys Leu
            180                 185                 190
Glu Ser Glu Ile Ser Glu Asn Ile Leu Glu Lys Gly Gly Asp Pro Leu
        195                 200                 205
Glu Lys Gln Asp Gln Ile Ser Gly Leu Ser Gln Ser Glu Val Lys Thr
    210                 215                 220
Asp Val Cys Thr Val His Leu Pro Asn Asp Phe Pro Thr Cys Leu Thr
225                 230                 235                 240
Ser Glu Ser Lys Val Tyr Gln Pro Val Ser Cys Pro Leu Ser Asp Leu
                245                 250                 255
Ser Glu Asn Val Glu Ser Val Val Asn Glu Glu Lys Ile Thr Glu Ser
            260                 265                 270
Ser Leu Val Glu Ile Thr Glu His Lys Asp Phe Thr Leu Lys Thr Glu
        275                 280                 285
Glu Leu Ile Glu Ser Pro Lys Leu Glu Ser Ser Glu Gly Glu Ile Ile
    290                 295                 300
Gln Thr Val Asp Arg Gln Ser Val Lys Ser Pro Glu Val Gln Leu Leu
305                 310                 315                 320
Gly His Val Glu Thr Glu Asp Val Glu Ile Ile Ala Thr Cys Asp Thr
                325                 330                 335
Phe Gly Asn Glu Asp Phe Asn Asn Ile Gln Asp Ser Glu Asn Asn Leu
            340                 345                 350
Leu Lys Asn Asn Leu Leu Asn Thr Lys Leu Glu Lys Ser Leu Glu Glu
```

```
        355                 360                 365
Lys Asn Glu Ser Leu Thr Glu His Pro Arg Ser Thr Glu Leu Pro Lys
    370                 375                 380
Thr His Ile Glu Gln Ile Gln Lys His Phe Ser Glu Asp Asn Asn Glu
385                 390                 395                 400
Met Ile Pro Met Glu Cys Asp Ser Phe Cys Ser Asp Gln Asn Glu Ser
                405                 410                 415
Glu Val Glu Pro Ser Val Asn Ala Asp Leu Lys Gln Met Asn Glu Asn
            420                 425                 430
Ser Val Thr His Cys Ser Glu Asn Asn Met Pro Ser Ser Asp Leu Ala
        435                 440                 445
Asp Glu Lys Val Glu Thr Val Ser Gln Pro Ser Glu Ser Pro Lys Asp
    450                 455                 460
Thr Ile Asp Lys Thr Lys Lys Pro Arg Thr Arg Arg Ser Arg Phe His
465                 470                 475                 480
Ser Pro Ser Thr Thr Trp Ser Pro Asn Lys Asp Thr Pro Gln Glu Lys
                485                 490                 495
Lys Arg Pro Gln Ser Pro Ser Pro Arg Arg Glu Thr Gly Lys Glu Ser
            500                 505                 510
Arg Lys Ser Gln Ser Pro Ser Pro Lys Asn Glu Ser Ala Arg Gly Arg
        515                 520                 525
Lys Lys Ser Arg Ser Gln Ser Pro Lys Lys Asp Ile Ala Arg Glu Arg
    530                 535                 540
Arg Gln Ser Gln Ser Arg Ser Pro Lys Arg Asp Thr Thr Arg Glu Ser
545                 550                 555                 560
Arg Arg Ser Glu Ser Leu Ser Pro Arg Arg Glu Thr Ser Arg Glu Asn
                565                 570                 575
Lys Arg Ser Gln Pro Arg Val Lys Asp Ser Ser Pro Gly Glu Lys Ser
            580                 585                 590
Arg Ser Gln Ser Arg Glu Arg Glu Ser Asp Arg Asp Gly Gln Arg Arg
        595                 600                 605
Glu Arg Glu Arg Arg Thr Arg Lys Trp Ser Arg Ser Arg Ser His Ser
    610                 615                 620
Arg Ser Pro Ser Arg Cys Arg Thr Lys Ser Lys Ser Ser Ser Phe Gly
625                 630                 635                 640
Arg Ile Asp Arg Asp Ser Tyr Ser Pro Arg Trp Lys Gly Arg Trp Ala
                645                 650                 655
Asn Asp Gly Trp Arg Cys Pro Arg Gly Asn Asp Arg Tyr Arg Lys Asn
            660                 665                 670
Asp Pro Glu Lys Gln Asn Glu Asn Thr Arg Lys Glu Lys Asn Asp Ile
        675                 680                 685
His Leu Asp Ala Asp Asp Pro Asn Ser Ala Asp Lys His Arg Asn Asp
    690                 695                 700
Cys Pro Asn Trp Ile Thr Glu Lys Ile Asn Ser Gly Pro Asp Pro Arg
705                 710                 715                 720
Thr Arg Asn Pro Glu Lys Leu Lys Glu Ser His Trp Glu Glu Asn Arg
                725                 730                 735
Asn Glu Asn Ser Gly Asn Ser Trp Asn Lys Asn Phe Gly Ser Gly Trp
            740                 745                 750
Val Ser Asn Arg Gly Arg Gly Arg Gly Asn Arg Gly Arg Gly Thr Tyr
        755                 760                 765
Arg Ser Ser Phe Ala Tyr Lys Asp Gln Asn Glu Asn Arg Trp Gln Asn
    770                 775                 780
Arg Lys Pro Leu Ser Gly Asn Ser Asn Ser Ser Gly Ser Glu Ser Phe
785                 790                 795                 800
```

```
Lys Phe Val Glu Gln Gln Ser Tyr Lys Arg Lys Ser Glu Gln Glu Phe
                805                 810                 815
Ser Phe Asp Thr Pro Ala Asp Arg Ser Gly Trp Thr Ser Ala Ser Ser
            820                 825                 830
Trp Ala Val Arg Lys Thr Leu Pro Ala Asp Val Gln Asn Tyr Tyr Ser
        835                 840                 845
Arg Arg Gly Arg Asn Ser Ser Gly Pro Gln Ser Gly Trp Met Lys Gln
    850                 855                 860
Glu Glu Glu Thr Ser Gly Gln Asp Ser Ser Leu Lys Asp Gln Thr Asn
865                 870                 875                 880
Gln Gln Val Asp Gly Ser Gln Leu Pro Ile Asn Met Met Gln Pro Gln
                885                 890                 895
Met Asn Val Met Gln Gln Gln Met Asn Ala Gln His Gln Pro Met Asn
            900                 905                 910
Ile Phe Pro Tyr Pro Val Gly Val His Ala Pro Leu Met Asn Ile Gln
        915                 920                 925
Arg Asn Pro Phe Asn Ile His Pro Gln Leu Pro Leu His Leu His Thr
    930                 935                 940
Gly Val Pro Leu Met Gln Val Ala Thr Pro Thr Ser Val Ser Gln Gly
945                 950                 955                 960
Leu Pro Pro Pro Pro Pro Pro Pro Pro Pro Ser Gln Gln Val Asn Tyr
                965                 970                 975
Ile Ala Ser Gln Pro Asp Gly Lys Gln Leu Gln Gly Ile Pro Ser Ser
            980                 985                 990
Ser His Val Ser Asn Asn Met Ser Thr Pro Val Leu Pro Ala Pro Thr
        995                 1000                1005
Ala Ala Pro Gly Asn Thr Gly Met Val Gln Gly Pro Ser Ser Gly Asn
    1010                1015                1020
Thr Ser Ser Ser Ser His Ser Lys Ala Ser Asn Ala Ala Val Lys Leu
1025                1030                1035                104
Ala Glu Ser Lys Val Ser Val Ala Val Glu Ala Ser Ala Asp Ser Ser
                1045                1050                1055
Lys Thr Asp Lys Lys Leu Gln Ile Gln Glu Lys Ala Ala Gln Glu Val
            1060                1065                1070
Lys Leu Ala Ile Lys Pro Phe Tyr Gln Asn Lys Asp Ile Thr Lys Glu
        1075                1080                1085
Glu Tyr Lys Glu Ile Val Arg Lys Ala Val Asp Lys Val Cys His Ser
    1090                1095                1100
Lys Ser Gly Glu Val Asn Ser Thr Lys Val Ala Asn Leu Val Lys Ala
1105                1110                1115                112
Tyr Val Asp Lys Tyr Lys Tyr Ser Arg Lys Gly Ser Gln Lys Lys Thr
                1125                1130                1135
Leu Glu Glu Pro Val Ser Thr Glu Lys Asn Ile Gly
            1140                1145
```

<210> 169
<211> 597
<212> DNA
<213> Homo Sapiens

<400> 169

```
gagactttta atcatctatc ccttgtgctt tacgcagacc ctacaataca ctagaggctt      60
caaagaggtc aaaaattcac atgtgtagac aaattaggtc ccttaagatg ccaggcaaac     120
gaagtgctac caaaacacgc aatgactgtc ctaaaagtgc gttctgggat acacctgtaa     180
acttggatca agttccctcc cctctcctca aaatatatcg acttgtgctg aaagaaatca     240
```

cgaccgatgc tcacaattct gacctcgtaa ttatataggg ggtggttttg gtttctgcgt 300
ctttccctga ttcagtggca ggtaacatat ttcatgtaca aaatgaactg caacaccacg 360
gcaaacaagg gacaggccct caaagttgtc ggtagggagc caggaccccg ccagtggcgt 420
ggggagacac cgtactaaac aagcttgcaa acagcaggca ccttcctgcc actgaggagg 480
aagggctggc taagggaggc cggggcggag gaagccaagc tctgcaggcc ctgacaaagt 540
cctcccggcc tccacgcgtc gccatggcaa cgcggggtct gtgctgcccg ggattgg 597

<210> 170
<211> 3344
<212> DNA
<213> Homo Sapiens

<400> 170
ggtacagctg cgcgtctgcg ggaataggtg cagcgggccc ttggcggggg actctgaggg 60
aggagctggg gacggcgacc ctaggagagt tctttggggt gactttcaag atggactcta 120
ctctaacagc aagtgaaatc cggcagcgat ttatagattt cttcaagagg aacgagcata 180
cgtatgttca ctcgtctgcc accatcccat tggatgaccc cactttgctc tttgccaatg 240
caggcatgaa ccagtttaaa cccatttttcc tgaacacaat tgacccatct caccccatgg 300
caaagctgag cagagctgcc aatacccaga agtgcatccg ggctgggggc aaacaaaatg 360
acctggacga tgtgggcaag gatgtctatc atcacacctt cttcgagatg ctgggctctt 420
ggtcttttgg agattacttt aaggaattgg catgtaagat ggctctggaa ctcctcaccc 480
aagagtttgg cattcccatt gaaagacttt atgttactta ctttggcggg gatgaagcag 540
ctggcttaga agcagatctg gaatgcaaac agatctggca aaatttgggg ctggatgaca 600
ccaaaatcct cccaggcaac atgaaggata acttctggga gatgggtgac acgggcccct 660
gtggtccttg cagtgagatc cactacgacc ggattggtgg tcgggacgcc gcacatcttg 720
tcaaccagga cgaccctaat gtgctggaga tctggaacct tgtgttcatc cagtataaca 780
gggaagctga tggcattctg aaacctcttc ccaagaaaag cattgacaca gggatgggcc 840
tggaacgact ggtatctgtg ctgcagaata agatgtccaa ctatgacact gacctttttg 900
tcccttactt tgaagccatt cagaagggca caggtgcccg accatacact gggaaagttg 960
gtgctgagga tgccgatggg attgacatgg cctaccgggt gctggctgac catgctcgga 1020
ccatcactgt ggcactggct gatggtggcc ggcctgacaa cacagggcgt ggatatgtgt 1080
tgagacggat tctccgccga gctgtccgat acgcccatga aaagctcaat gccagcaggg 1140
gcttctttgc tacgttagtg gatgttgtcg tccagtccct gggagatgca tttcctgagc 1200
tgaagaagga cccagacatg gtgaaggaca tcattaatga agaagaggtg cagtttctca 1260
agactctcag cagagggcgt cgcatcctgg acaggaaaat tcagagcctg ggagacagca 1320
agaccattcc cggagacact gcttggctcc tctatgacac ctatgggttt ccagtggatc 1380
tgactggact gattgctgaa gagaagggcc tggtggtaga catggatggc tttgaagagg 1440
agaggaaact ggcccagctg aaatcacagg gcaagggagc tggtggggaa gacctcatta 1500
tgctggacat ttacgctatc gaagagctcc gggcacgggg tctggaggtc acagatgatt 1560
ccccaaagta caattaccat ttggactcca gtggtagcta tgtatttgag aacacagtgg 1620
ctacggtgat ggctctgcgc agggagaaga tgttcgtgga agaggtgtcc acaggccagg 1680
agtgtggagt ggtgctggac aagacctgtt tctatgctga gcaaggaggc cagatctatg 1740
acgaaggcta cctggtgaag gtggatgaca gcagtgaaga taaaacagag tttacagtga 1800
agaatgctca ggtccgagga gggtatgtgc tacacattgg aaccatctac ggtgacctga 1860
aagtgggga tcaggtctgg ctgtttattg atgagccccg acgaagaccc atcatgagca 1920
accacacagc tacgcacatt ctgaacttcg ccctgcgctc agtgcttggg gaagctgacc 1980
agaaaggctc attggttgct cctgaccgcc tcagatttga ctttactgcc aagggagcca 2040
tgtccaccca acagatcaag aaggctgaag agattgctaa tgagatgatt gaggcagcca 2100
aggccgtcta tacccaggat tgcccctgg cagcagcgaa agccatccag ggcctacggg 2160
ctgtgtttga tgagacctat cctgaccctg tgcgagtcgt ctccattggg gtcccggtgt 2220
ccgagttgct ggatgacccc tctgggcctg ctggctccct gacttctgtt gagttctgtg 2280
ggggaacgca cctgcggaac tcgagtcatg caggagcttt tgtgatcgtg acggaagaag 2340
ccattgccaa gggtatccgg aggattgtgg ctgtcacagg tgccgaggcc cagaaggccc 2400
tcaggaaagc agagagcttg aagaaatgtc tctctgtcat ggaagccaaa gtgaaggctc 2460
agactgctcc aaacaaggat gtgcagaggg agatcgctga ccttggagag gccctggcca 2520

```
ctgcagtcat cccccagtgg cagaaggatg aattgcggga gactctcaaa tccctaaaga    2580
aggtcatgga tgacttggac cgagccagca aagccgatgt ccagaaacga gtgttagaga    2640
agacgaagca gttcatcgac agcaacccca accagcctct tgtcatcctg gagatggaga    2700
gcggcgcctc agccaaggcc ctgaatgaag ccttgaagct cttcaagatg cactcccctc    2760
agacttctgc catgctcttc acggtggaca atgaggctgg caagatcacg tgcctgtgtc    2820
aagtccccca gaatgcagcc aatcggggct taaaagccag cgagtgggtg cagcaggtgt    2880
caggcttgat ggacggtaaa ggtggtggca aggatgtgtc tgcacaggcc acaggcaaga    2940
acgttggctg cctgcaggag gcgctgcagc tggccacttc cttcgcccag ctgcgcctcg    3000
gggatgtaaa gaactgagtg gggaaggagg aggctcccac tggatccatc cgtccagcca    3060
agagctcttc atctgctaca agaacatttg aatcttggga cctttaaaga gcccctccta    3120
acccagcagt aactggaaca cacttgggag cagtcctatg tctcagtgcc ccttaaattt    3180
ctgccctgag ccctccacgt cagtgccatc ggtctagaac cactaacccc gcattgctgt    3240
tgatcgtcac gctcgcatct atagataacg gctctccaga cctgagcttt ccgcgtcagc    3300
aagtaggaat cgtttttgct gcagagaata aaaggaccac gtgc                      3344
```

<210> 171
<211> 1004
<212> PRT
<213> Homo Sapiens

<400> 171

```
Tyr Ser Cys Ala Ser Ala Gly Ile Gly Ala Ala Gly Pro Trp Arg Gly
 1               5                  10                  15
Thr Leu Arg Glu Glu Leu Gly Thr Ala Thr Leu Gly Glu Phe Phe Gly
            20                  25                  30
Val Thr Phe Lys Met Asp Ser Thr Leu Thr Ala Ser Glu Ile Arg Gln
        35                  40                  45
Arg Phe Ile Asp Phe Phe Lys Arg Asn Glu His Thr Tyr Val His Ser
    50                  55                  60
Ser Ala Thr Ile Pro Leu Asp Asp Pro Thr Leu Leu Phe Ala Asn Ala
65                  70                  75                  80
Gly Met Asn Gln Phe Lys Pro Ile Phe Leu Asn Thr Ile Asp Pro Ser
                85                  90                  95
His Pro Met Ala Lys Leu Ser Arg Ala Ala Asn Thr Gln Lys Cys Ile
            100                 105                 110
Arg Ala Gly Gly Lys Gln Asn Asp Leu Asp Asp Val Gly Lys Asp Val
        115                 120                 125
Tyr His His Thr Phe Phe Glu Met Leu Gly Ser Trp Ser Phe Gly Asp
    130                 135                 140
Tyr Phe Lys Glu Leu Ala Cys Lys Met Ala Leu Glu Leu Leu Thr Gln
145                 150                 155                 160
Glu Phe Gly Ile Pro Ile Glu Arg Leu Tyr Val Thr Tyr Phe Gly Gly
                165                 170                 175
Asp Glu Ala Ala Gly Leu Glu Ala Asp Leu Glu Cys Lys Gln Ile Trp
            180                 185                 190
Gln Asn Leu Gly Leu Asp Asp Thr Lys Ile Leu Pro Gly Asn Met Lys
        195                 200                 205
Asp Asn Phe Trp Glu Met Gly Asp Thr Gly Pro Cys Gly Pro Cys Ser
    210                 215                 220
Glu Ile His Tyr Asp Arg Ile Gly Gly Arg Asp Ala Ala His Leu Val
225                 230                 235                 240
Asn Gln Asp Asp Pro Asn Val Leu Glu Ile Trp Asn Leu Val Phe Ile
                245                 250                 255
Gln Tyr Asn Arg Glu Ala Asp Gly Ile Leu Lys Pro Leu Pro Lys Lys
            260                 265                 270
```

```
Ser Ile Asp Thr Gly Met Gly Leu Glu Arg Leu Val Ser Val Leu Gln
        275                 280                 285
Asn Lys Met Ser Asn Tyr Asp Thr Asp Leu Phe Val Pro Tyr Phe Glu
    290                 295                 300
Ala Ile Gln Lys Gly Thr Gly Ala Arg Pro Tyr Thr Gly Lys Val Gly
305                 310                 315                 320
Ala Glu Asp Ala Asp Gly Ile Asp Met Ala Tyr Arg Val Leu Ala Asp
                325                 330                 335
His Ala Arg Thr Ile Thr Val Ala Leu Ala Asp Gly Gly Arg Pro Asp
            340                 345                 350
Asn Thr Gly Arg Gly Tyr Val Leu Arg Arg Ile Leu Arg Arg Ala Val
        355                 360                 365
Arg Tyr Ala His Glu Lys Leu Asn Ala Ser Arg Gly Phe Phe Ala Thr
    370                 375                 380
Leu Val Asp Val Val Val Gln Ser Leu Gly Asp Ala Phe Pro Glu Leu
385                 390                 395                 400
Lys Lys Asp Pro Asp Met Val Lys Asp Ile Ile Asn Glu Glu Glu Val
                405                 410                 415
Gln Phe Leu Lys Thr Leu Ser Arg Gly Arg Arg Ile Leu Asp Arg Lys
            420                 425                 430
Ile Gln Ser Leu Gly Asp Ser Lys Thr Ile Pro Gly Asp Thr Ala Trp
        435                 440                 445
Leu Leu Tyr Asp Thr Tyr Gly Phe Pro Val Asp Leu Thr Gly Leu Ile
    450                 455                 460
Ala Glu Glu Lys Gly Leu Val Val Asp Met Asp Gly Phe Glu Glu Glu
465                 470                 475                 480
Arg Lys Leu Ala Gln Leu Lys Ser Gln Gly Lys Gly Ala Gly Gly Glu
                485                 490                 495
Asp Leu Ile Met Leu Asp Ile Tyr Ala Ile Glu Glu Leu Arg Ala Arg
            500                 505                 510
Gly Leu Glu Val Thr Asp Asp Ser Pro Lys Tyr Asn Tyr His Leu Asp
        515                 520                 525
Ser Ser Gly Ser Tyr Val Phe Glu Asn Thr Val Ala Thr Val Met Ala
    530                 535                 540
Leu Arg Arg Glu Lys Met Phe Val Glu Glu Val Ser Thr Gly Gln Glu
545                 550                 555                 560
Cys Gly Val Val Leu Asp Lys Thr Cys Phe Tyr Ala Glu Gln Gly Gly
                565                 570                 575
Gln Ile Tyr Asp Glu Gly Tyr Leu Val Lys Val Asp Asp Ser Ser Glu
            580                 585                 590
Asp Lys Thr Glu Phe Thr Val Lys Asn Ala Gln Val Arg Gly Gly Tyr
        595                 600                 605
Val Leu His Ile Gly Thr Ile Tyr Gly Asp Leu Lys Val Gly Asp Gln
    610                 615                 620
Val Trp Leu Phe Ile Asp Glu Pro Arg Arg Arg Pro Ile Met Ser Asn
625                 630                 635                 640
His Thr Ala Thr His Ile Leu Asn Phe Ala Leu Arg Ser Val Leu Gly
                645                 650                 655
Glu Ala Asp Gln Lys Gly Ser Leu Val Ala Pro Asp Arg Leu Arg Phe
            660                 665                 670
Asp Phe Thr Ala Lys Gly Ala Met Ser Thr Gln Gln Ile Lys Lys Ala
        675                 680                 685
Glu Glu Ile Ala Asn Glu Met Ile Glu Ala Ala Lys Ala Val Tyr Thr
    690                 695                 700
Gln Asp Cys Pro Leu Ala Ala Ala Lys Ala Ile Gln Gly Leu Arg Ala
```

```
705                 710                 715                 720
Val Phe Asp Glu Thr Tyr Pro Asp Pro Val Arg Val Val Ser Ile Gly
                725                 730                 735
Val Pro Val Ser Glu Leu Leu Asp Asp Pro Ser Gly Pro Ala Gly Ser
            740                 745                 750
Leu Thr Ser Val Glu Phe Cys Gly Gly Thr His Leu Arg Asn Ser Ser
        755                 760                 765
His Ala Gly Ala Phe Val Ile Val Thr Glu Glu Ala Ile Ala Lys Gly
    770                 775                 780
Ile Arg Arg Ile Val Ala Val Thr Gly Ala Glu Ala Gln Lys Ala Leu
785                 790                 795                 800
Arg Lys Ala Glu Ser Leu Lys Lys Cys Leu Ser Val Met Glu Ala Lys
                805                 810                 815
Val Lys Ala Gln Thr Ala Pro Asn Lys Asp Val Gln Arg Glu Ile Ala
            820                 825                 830
Asp Leu Gly Glu Ala Leu Ala Thr Ala Val Ile Pro Gln Trp Gln Lys
        835                 840                 845
Asp Glu Leu Arg Glu Thr Leu Lys Ser Leu Lys Lys Val Met Asp Asp
    850                 855                 860
Leu Asp Arg Ala Ser Lys Ala Asp Val Gln Lys Arg Val Leu Glu Lys
865                 870                 875                 880
Thr Lys Gln Phe Ile Asp Ser Asn Pro Asn Gln Pro Leu Val Ile Leu
                885                 890                 895
Glu Met Glu Ser Gly Ala Ser Ala Lys Ala Leu Asn Glu Ala Leu Lys
            900                 905                 910
Leu Phe Lys Met His Ser Pro Gln Thr Ser Ala Met Leu Phe Thr Val
        915                 920                 925
Asp Asn Glu Ala Gly Lys Ile Thr Cys Leu Cys Gln Val Pro Gln Asn
    930                 935                 940
Ala Ala Asn Arg Gly Leu Lys Ala Ser Glu Trp Val Gln Gln Val Ser
945                 950                 955                 960
Gly Leu Met Asp Gly Lys Gly Gly Gly Lys Asp Val Ser Ala Gln Ala
                965                 970                 975
Thr Gly Lys Asn Val Gly Cys Leu Gln Glu Ala Leu Gln Leu Ala Thr
            980                 985                 990
Ser Phe Ala Gln Leu Arg Leu Gly Asp Val Lys Asn
        995                 1000
```

<210> 172
<211> 659
<212> DNA
<213> Homo Sapiens

<400> 172

```
gcctgagcaa cgtctccgag caggcgctgg gctagaggcg ggtctcaacc agctactcat      60
tggaggcggg cttgagagcg gcggccaggg aggtgcggag cagcctcggc ggcggcggcc     120
gaaccaaccg agtcggatcc tgaccctaaa acctagtatt ttccacttgt tcatcaatat     180
ggaaaactca gattccaatg acaaaggaag tggtgatcag tctgcagcac agcgcagaag     240
tcagatggac cgattggatc gagaagaagc tttctatcaa tttgtaaata acctgagtga     300
agaagattat aggcttatga gagataacaa tttgctaggc accccaggtg aaagtactga     360
ggaagagttg ctgagacgac tacagcaaat taaagaaggc ccaccaccgc aaaactcaga     420
tgaaaataga ggaggagact cttcagatga tgtgtctaat ggtgactcta taatagactg     480
gcttaactct gtcagacaaa ctggaaatac aacaagaagt gggcaaagag gaaaccaatc     540
ttggagagca gtgagtcgga ctaatccaaa cagtgggtga tttcagattc agtttagaga     600
taaatgttaa cccgtaataa tgggagccaa aattcagaga atgaaaatga gccatctgc      659
```

<210> 173
<211> 192
<212> PRT
<213> Homo Sapiens

<400> 173

```
Pro Glu Gln Arg Leu Arg Ala Gly Ala Gly Leu Glu Ala Gly Leu Asn
 1               5                  10                  15
Gln Leu Leu Ile Gly Gly Gly Leu Glu Ser Gly Gly Gln Gly Gly Ala
            20                  25                  30
Glu Gln Pro Arg Arg Arg Arg Pro Asn Gln Pro Ser Arg Ile Leu Thr
        35                  40                  45
Leu Lys Pro Ser Ile Phe His Leu Phe Ile Asn Met Glu Asn Ser Asp
    50                  55                  60
Ser Asn Asp Lys Gly Ser Gly Asp Gln Ser Ala Ala Gln Arg Arg Ser
65                  70                  75                  80
Gln Met Asp Arg Leu Asp Arg Glu Glu Ala Phe Tyr Gln Phe Val Asn
                85                  90                  95
Asn Leu Ser Glu Glu Asp Tyr Arg Leu Met Arg Asp Asn Asn Leu Leu
            100                 105                 110
Gly Thr Pro Gly Glu Ser Thr Glu Glu Glu Leu Leu Arg Arg Leu Gln
        115                 120                 125
Gln Ile Lys Glu Gly Pro Pro Pro Gln Asn Ser Asp Glu Asn Arg Gly
    130                 135                 140
Gly Asp Ser Ser Asp Asp Val Ser Asn Gly Asp Ser Ile Ile Asp Trp
145                 150                 155                 160
Leu Asn Ser Val Arg Gln Thr Gly Asn Thr Thr Arg Ser Gly Gln Arg
                165                 170                 175
Gly Asn Gln Ser Trp Arg Ala Val Ser Arg Thr Asn Pro Asn Ser Gly
            180                 185                 190
```

<210> 174
<211> 610
<212> DNA
<213> Homo Sapiens

<400> 174

```
gtactggcat cagtcaatgt tctggagtga tttgggcccc gatgttggct atgaagctat      60
tggtcttgtg gacagtagtt tgcccacagt tggtgttttt gcaaaagcaa ctgcacaaga     120
caaccccaaa tctgccacag agcagtcagg aactggtatc cgatcagaga gtgagacaga     180
gtccgaggcc tcagaaatta ctattcctcc cagcaccccg gcagttccac aggctcccgt     240
ccagggggag gactacggca aaggtgtcat cttctacctc agggacaaag tggtcgtggg     300
gattgtgcta tggaacatct ttaaccgaat gccaatagca aggaagatca ttaaggacgg     360
tgagcagcat gaagatctca atgaagtagc caaactattc aacattcatg aagactgaag     420
ccccacagtg gaattggcaa acccactgca gcccctgaga ggaggtcgaa tgggtaaagg     480
agcatttttt tattcagcag actttctctg tgtatgagtg tgaatgatca agtcctttgt     540
gaatattttc aactatgtag gtaaattctt aatgttcnca tagtgaaata aattctgatt     600
cttctaaaaa                                                            610
```

<210> 175
<211> 138
<212> PRT
<213> Homo Sapiens

<400> 175

```
Tyr Trp His Gln Ser Met Phe Trp Ser Asp Leu Gly Pro Asp Val Gly
 1               5                  10                  15
Tyr Glu Ala Ile Gly Leu Val Asp Ser Ser Leu Pro Thr Val Gly Val
            20                  25                  30
Phe Ala Lys Ala Thr Ala Gln Asp Asn Pro Lys Ser Ala Thr Glu Gln
        35                  40                  45
Ser Gly Thr Gly Ile Arg Ser Glu Ser Glu Thr Glu Ser Glu Ala Ser
    50                  55                  60
Glu Ile Thr Ile Pro Pro Ser Thr Pro Ala Val Pro Gln Ala Pro Val
65                  70                  75                  80
Gln Gly Glu Asp Tyr Gly Lys Gly Val Ile Phe Tyr Leu Arg Asp Lys
                85                  90                  95
Val Val Val Gly Ile Val Leu Trp Asn Ile Phe Asn Arg Met Pro Ile
            100                 105                 110
Ala Arg Lys Ile Ile Lys Asp Gly Glu Gln His Glu Asp Leu Asn Glu
        115                 120                 125
Val Ala Lys Leu Phe Asn Ile His Glu Asp
    130                 135
```

<210> 176
<211> 805
<212> DNA
<213> Homo Sapiens

<400> 176

```
gggacagcca agtctgtgac ttgcacgtac tcccctgccc tcaacaagat gttttgccaa      60
ctggccaaga cctgccctgt gcagctgtgg gttgattcca cacccccgcc cggcacccgc     120
gtccgcgcca tggccatcta caagcagtca cagcacatga cggaggttgt gaggcgctgc     180
ccccaccatg agcgctgctc agatagcgat ggtctggccc ctcctcagca tcttatccga     240
gtggaaggaa atttgcgtgt ggagtatttg gatgacagaa acacttttcg acatagtgtg     300
gtggtgccct atgagccgcc tgaggttggc tctgactgta ccaccatcca ctacaactac     360
atgtgtaaca gttcctgcat gggcggcatg aaccggaggc ccatcctcac catcatcaca     420
ctggaagact ccagtggtaa tctactggga cggaacagct ttgaggtgcg tgtttgtgcc     480
tgtcctggga gagaccggcg cacagaggaa gagaatctcc gcaagaaagg ggagcctcac     540
cacgaagctg cccccaggga gcactaagcg agcactgccc aacaacacca agctcctctc     600
cccagccaaa gaagaaanca ctggatngag aatatttcac cccttcanat tcgttgggcg     660
tgagcgcttc cganaatgtt ccgaagagct gnaagaaggc cttgggaact caaaggatgc     720
ccaaggcttg ggaaaggagc caanggggggg gaancaangg gctcaactnc aagccaacct     780
gaaagttcca aaaaangggt ccagt                                           805
```

<210> 177
<211> 626
<212> DNA
<213> Homo Sapiens

<400> 177

```
ctaatttgtc tgtttattcc cacaaggtag ccaggggtgg gggcgccgag ccaagcccag      60
caggccatgg gaccttcctc cggcggggtg cacgctggat tttcgggtct gccccaccag     120
caggtttgca ggcaggccgt catgagtgcc ggtggaaggc tccgagggcg tgggcagggg     180
ctcgggcggg gccacacact tgtggagcta gaaatantgg ggcaggtcct tctctatcac     240
caggggctcc tccatgggtc cgtagcgctt caccacgcag ccgttcttgt cgatgaggaa     300
ctgtgganan acggtgtcca aactgtgggg ccacccctgc aaggggctga ggctgccctt     360
cctgtccgct gcccatctgg gccacggctg tggccagggg aaactggtcc cctacccccc     420
acagcccccc taccttggt gaagttccac ttgatggcac tggaaaanaa gcacatggac      480
gtgagcgtcc ccaggcagcc ccccacagtc cccaaagctt gtcctgtctc caaggaggcc     540
```

anaaaggttg tnagcttccc ccggtnccte cacangccac agtgccccca aancccccc 600
aanagccatc tttaccccaa ggaggg 626

<210> 178
<211> 793
<212> DNA
<213> Homo Sapiens

<400> 178
gcgcgaggct gctgctgctg cccccggccc gcgcggctgg aaacggagag gccgagccaa 60
gcggcggccc ctcttatgct gggaggatgc tggagagtag cggctgcaaa gcgctgaagg 120
agggcgtgct ggagaagcgc agcgacgggt tgttgcagct ctggaagaaa aagtgttgca 180
tcctcaccga ggaagggctg ctgcttatcc cgcccaagca gctgcaacac cagcagcagc 240
agcaacagca gcagcagcag cagcaacaac agcccgggca ggggccggcc gagccgtccc 300
aacccagtgg ccccgctgtc gccagcctcg agccgccggt caagctcaag gaactgcact 360
tctccaacat gaagaccgtg gactgtgtgg agcgcaaggg caagtacatg tacttcactg 420
tggtgatggc agagggcaag gagatcgact ttcggtgccc gcaagaccag ggctggaacg 480
ccgagatcac gctgcagatg gtgcagtaca agaatcgtca ggccatcctg gcggtcaaat 540
ccacgcggca gaagcagcag cacctggtcc agcancagcc cccctcgcag ccgcagccgc 600
agccgcagct ccaagcccca accccagcct tcagcctcaa gccngcaacc ccaagcccca 660
attcacaaac cccaagccct caagccccaa cccaaagccc tcangcccca ngcaagntcc 720
aacccgttat ncggccatcc aacattcaan atccaanact ctcaangcct taactncgcn 780
acccaanaac nct 793

<210> 179
<211> 786
<212> DNA
<213> Homo Sapiens

<400> 179
aatatcagag ttttaatttc aaccagctgg cacaacaatg aaagtgtcag actttctgaa 60
agtactcgag aaataatgaa taaattctta atgttttccc ctccaccgcc ctttttatt 120
ctccaagatt aggaattact acggattagg tttttgaaaa taaagtttcc tttttggaaa 180
atggtctaca ttcagaaatg tcttagaaca agcatttaaa aaaaactaat aaataatcat 240
aaatcaaaat acattaaaat aaaattacag tacatcatcg ctcctagaaa attcaccata 300
caagacgatc ctttcaaagg ttcataaata aaagtcttct tgactcgaaa tcgtttcctg 360
catcgtgatg aaaagtatgc agaaaactaa gaagaatcgc aagttttcag tagggtgatg 420
tccaaactac ttgatctggt gcggggcgga gagactgttt tgcttttgat ccaagtgaag 480
acaatagaaa tgtgctcgtc ccacttcctc aagtcctcaa aaccttgtct tgcccgggag 540
ctgccccttt cangcagagt tgggaggtgc tgcgganaaa ccggtgcccg tgcggctgcc 600
aatgcggctg tgggtgtggg tgcngtattt ggtgccggat gcnggtgccg ggtnaaggtg 660
tggggtgcca antnaaggat gaaaatgtgg atnttngnat nttgattccg gatacggggt 720
gggaacctng cnggggggcn naaggcttgg ggttggggct naanggctgg ggtttttaa 780
ttgggg 786

<210> 180
<211> 791
<212> DNA
<213> Homo Sapiens

<400> 180
aggacctcag agacccaggc tctgtgattg tggccttcaa ggaaggggaa cagaaggaga 60
aggagggtat cctgcagctg cgtcgcacca actcagccaa gcccagtcca ctggcaccat 120
ccctcatggc ctcttctccg acttctatct gtgtgtgtgg gcaggtgcca gctggggtgg 180
gagttctgca gtgtgacctg tgtcaggact ggttccatgg gcagtgtgtg tcagtgcccc 240

atctcctcac ctctccaaag cccagtctca cttcatctcc actgctagcc tggtgggaat 300
gggacacaaa attcctgtgt ccactgtgta tgcgctcacg acggccacgc ctagagacaa 360
tcctagcctt gctggttgcc ctgcagaggc tgcccgtgcg gctgcctgag ggtgaggccc 420
ttcagtgtct cacagagagg gccattggct ggcaagaccg tgccagaaag gctctggcct 480
ctgaagatgt gactgctctg ttgcgacagc tggctgagct tcgccaacag ctacaggcca 540
aacccanacc agaggaggcc tcagtctaca cttcagccac tgcctgtgac cctatcagag 600
aaggcagtgg caacaatatt tcnaangtcc aagggctgct ggagaatgga gacantgttg 660
accagtcctg agaacatggc tccaggaaag ggctctgacc tggagctacn gtcctcactg 720
ttgccgcaat ttgactggnc ctgtttttgg ganctgcctg aaggcaatcc cggggctccc 780
cctggaggga g 791

<210> 181
<211> 747
<212> DNA
<213> Homo Sapiens

<400> 181
agtatccaaa catactcatt gttttatttt taacaaaaga aatgaaatta aagatagacc 60
acaggtagag tcatgaaatt cttgtttttc cctattcttt ttggtaatta caacgtacat 120
tgtcttcttt tataataaga cccaagggga gaaaagaaaa ggatgtacaa tgaaggtaca 180
agttttgaag caccaaaata ttttatgaca gggacaaaaa aacaaaaaac aaacaaaaat 240
tgaagtacag aaagagggtg gtgggggcaa aaataaaggt acgcacttgg gcttcctcaa 300
gatttgtttg tccctattca gactagaatg aaactggttt aggaaatcac tcctgtatgc 360
tagcaggaat gttgctggca agacacttct gagcatcggg gtgtggactt tacgaaccaa 420
ccttttaaca gtaactctag gagagaggat atcaaaaatt ggcagtgaaa aattatagat 480
aggcaaaaag ctccttctga ggtccaggcc aggagatagt angatttaag aaacaaacaa 540
acaataacaa ccacaaatgg acctttggtg ccactgtcac aactgttgct catcagagta 600
ggagaattgt ancaaaggca ttaaagaagg gacaagcaag ctgaagagcc tgaatccttg 660
gggttgtaag ccnattttgg gnttcctttc aagaaaaggg ctgttggncg gtggaanggg 720
tcanggaaca ntatttcacg ggtcngc 747

<210> 182
<211> 909
<212> DNA
<213> Homo Sapiens

<400> 182
aaacagagag ccaaatcatg agtgaactcc cattcacaat tgcttccaag ataataaaat 60
acctaggaat ccaacttaca aaggatgtga aggacctctt caaggagaac tacaaaccac 120
tgctcaatga aataaaagag gatacaaaca aatggaagaa cattccatgc tcatgggtag 180
gaagaatcaa tatcgtgaaa atggccatac tgcccaaggt aatgtataga ttcaatgcca 240
tccccatcaa gctaccaatg actttcttca cagaattgga aaaaactact caaaagttca 300
tatggaacca aaaaagagcc cacattgcca agtcaatcct aagccaaaag aacaaagctg 360
gaggcatcac gctacctgac ttcaaactat actacaaggc tacagtaacc aaaacagcgt 420
ggtactggta ccaaaacaga gatataaatc aatgcaacag aacagagccc tcagaaataa 480
tgccacatat ctacaactat ctgatctttg acaaacctga gaaaaacaag caatggggaa 540
aggattccct atttaataaa tggtgctggg aaaactggct agccatatgt agaaagctga 600
aactggatct cttctttata ccttatacaa aaattaattg aagatggntt aaaggactta 660
aacgttagac ctaaaaccat aaaaacccta gaagaaaaac ctaggcatta ccattcangg 720
acataggctt gggcaaggac ttcctgtcta aaacaccaan agcaatggga ncaaaagcca 780
aaattgcaaa tggggattct aattaactaa agggcttttg cacagcnaag aagctccatc 840
agagngaaca ggaacntcaa antgggagaa attttgaacc taccatcnga naaggctaat 900
nccagaatc 909

<210> 183

<211> 708
<212> DNA
<213> Homo Sapiens

<400> 183
attatcatta tactttaagt tttaggttac atgtgcacaa tgtgcaggtt agttacatat 60
gtatacatgt gccatgctgg tgtgctgcac ccattaactc gttatttagc attaggtata 120
tctcctaatg ctatccctcc cgcctccccc caccccacaa cagtccccag agtgtgatgt 180
tccccttcct gtgtccatgt gttctcactg ttcaattccc acctatgagt gagaatatgc 240
ggtgtttggt ttttttgtcc ttgccatagt ttactgagaa tgatgatttc caatttcatc 300
cctgtcccta caaaggacat gaactcatca ttttttatgg ctgcatagta ttccatggtg 360
tatatgtgcc acatttttctt aatccagtct atcattgttg gccatttggg ttggttccaa 420
gtctttgcta ttgtgaatac tgccgcaata aacatacgtg tgcatgtgtc tttatagcag 480
catgatttat antccttggg gtatatactc agtaatggga tggctgggtc aaatggnatt 540
ccaantccan atcccttang aattgccaca cggactccac aanggttgaa ctantttaca 600
gtcccancaa cagngtnaaa gggtccnaan tcnccaaaat cctctccaag caccngttgt 660
tcccggactt tttaanggat tgncaattcc aaccgggngt caaaaggg 708

<210> 184
<211> 855
<212> DNA
<213> Homo Sapiens

<400> 184
agactcacag tctgctggtg ggcagagaag acagaaacga catgagcaca gcaggaaaag 60
taatcaaatg caaagcagct gtgctatggg aggtaaagaa acccttttcc attgaggatg 120
tggaggttgc acctcctaag gcttatgaag ttcgcattaa gatggtggct gtaggaatct 180
gtcgcacaga tgaccacgtg gttagtggca acctggtgac ccccttcct gtgattttag 240
gccatgaggc agccggcatc gtggagagtg ttggagaagg ggtgactaca gtcaaaccag 300
gtgataaagt catcccgctc tttactcctc agtgtggaaa atgcagagtt tgtaaaaacc 360
cggagagcaa ctactgcttg aaaaatgatc taggcaatcc tcgggggacc ctgcaggatg 420
gcaccaggag gttcacctgc agggggaagc ccattcacca cttccttggc accagcacct 480
tctcccagta cacggtggtg gatgagaatg cagtggccaa aattgatgca gcctcgcccc 540
tggagaaagt ctgcctcatt ggctgtggat tctcgactgg gttatgggtc tgcagttaac 600
gttgccaagg tcaccccagg ctctacctgt gctgtgtgtg gcctgggaag ggtcggccta 660
tctgctgtta tgggctgtta aagcaactgg aggcanccag aatcaattgc ggtggacatc 720
aacaaggaca aattttgcaa agggcaaaag agttgggtgc cactgaatgc catcaaccct 780
caagnctnca ngnaaaccca tccaggnaag tgctaaaang gaatttaccg attggagggt 840
ttggattttt ccgtt 855

<210> 185
<211> 865
<212> DNA
<213> Homo Sapiens

<400> 185
cacagatgtt caatcaactg atgaagcaag tgtcaggact tactgttgac acagaggagc 60
ggctgaaagg agttattgac ctggtctttg agaaggctat tgatgaaccc agtttctctg 120
tggcttacgc aaacatgtgt cgatgtctag taacgctgaa agtacccatg gcagacaagc 180
ctggtaacac agtgaatttc cggaagctgc tactgaaccg ttgccagaag gagtttgaaa 240
aagataaagc agatgatgat gtctttgaga agaagcagaa agaacttgag gctgccagtg 300
ctccagagga gaggacaagg cttcatgatg aactggaaga agccaaggac aaagcccggc 360
ggagatccat tggcaacatc aagtttattg gagaactctt taaactcaaa atgctgactg 420
aagccatcat gcatgactgt gtggtgaagc tgctaaagaa ccatgatgaa gaatccctgg 480
agtgcctgtg tcgcctgctc accaccattg gcaaagactt ggactttgaa aaagcaaagc 540

cacgtatgga ccagtacttt aatcaagatg gagaaaattg tnaaagaaag aaaaacctca 600
tctagggatt cggttcatgc ttcaaagatg ttatanacct aaggctgttg caattggggt 660
atctcgaaag agcagatnaa gggcctnaan ctatcgaaca gattcacaaa ganggctaaa 720
attgaaanaa caagaatagc caaagggaag gnccaacaac tcatggacca anggagaaat 780
agaataccaa ggtgttccaa aaanttggcc aaangnnggt tggaaanacn gttcaaaggg 840
ggccangaaa aantccgggt actgg 865

<210> 186
<211> 736
<212> DNA
<213> Homo Sapiens

<400> 186
aaatatttgt tctatgtatt tacaagcctt aaagttgctc taaagatttc aagagtatta 60
agagtacttt tctcagggta gcactttngt ttttttaaac aattcttgga gttctgtggt 120
ccacagcatt tccttctgtt tcaatgttat gtatgttttg attactattg tgatttttta 180
aattttctga agcaagctga gaggcaggca gaaagatttg atgccaaaaa aaaaaaaatc 240
tttcttacct tgttcacccc aaactttctc aaatctggac taaatgctat accttaaaac 300
aaacatgagg tgcatcttga aggggaggga aatttatttc tctgcttttc tattatacaa 360
gttgtttaca gaaactgcaa attaaaaaat tacactggca tttgcagtcc ttaaaataaa 420
ttaaaagttc tcaacttttt ttttttttg ctaaacattt ttttaagtat gagtccttgt 480
ttaaaaagaa aagattaaaa cagaaaatat tttctataaa taatacatgt attttggttt 540
tagtgctccc gccctaaggt ttgaagttta cttttancca ngtacctttt tcctccatga 600
tcacctttt ttctctttcc cctctcccaa ntccgtgcac acgtgggggt ttccggcaan 660
aattggcctt gctgnactgt gattgggcga anaacgttga aaaacctttt taaaaaaaaa 720
tacttaaaat tgggtt 736

<210> 187
<211> 946
<212> DNA
<213> Homo Sapiens

<400> 187
tgaaggagct acaggccgag caggaggacc gggctttaag gagttttaag ctgagtgtca 60
ctgtagaccc caaataccat cccaagatta tcgggagaaa gggggcagta attacccaaa 120
tccggttgga gcatgacgtg aacatccagt ttcctgataa ggacgatggg aaccagcccc 180
aggaccaaat taccatcaca gggtacgaaa agaacacaga agctgccagg gatgctatac 240
tgagaattgt gggtgaactt gagcagatgg tttctgagga cgtcccgctg gaccaccgcg 300
ttcacgcccg catcattggt gcccgcggca aagccattcg caaaatcatg gacgaattca 360
aggtggacat tcgcttccca cagagcggag ccccagaccc caactgcgtc actgtgacgg 420
ggctcccaga gaatgtggag gaagccatcg accacatcct caatctggag gaggaatacg 480
tgagtctctg tgggccttgg agccctgagg cgccctggca cgtccaccgg cctgaggccc 540
agccaggagc ttcaggggac aaggtggcac ttgtgtttcc agaggcaagc naagtgcagg 600
ggtgagcaag cnggcgggat gctgggggtg ctggggcaaa ctgaccctgt cttcctgtct 660
tccgcctgca gctagcctga cgttgtggac agtnaangcg cctgcangtt atacatgaaa 720
cccccagcac acgaanaagc caanggnacc tttcaaaagg ctttnttggt gccgggacca 780
acctgggacc gccagcaacc aatnaaaaaa ggcnctgacn ttaaccaagc tcngagggaa 840
tttcccancc tttgggggcc caaggtggct cccaaagaac cctccccntt nggggccccc 900
aaacnaatna ttgttcaaaa anggaacaaa aacccctctc aagccc 946

<210> 188
<211> 802
<212> DNA
<213> Homo Sapiens

<400> 188
aaagtcaagg ncgtttattt ccngaggnca tgacacanga agtggaatcc naaccacggn 60
tgcggnnnaa aagtgatgaa ggccaaagtg ctgactgaca tgccgggtgg accaaganct 120
ggagtcngtt atcntaacac gaatgcccan gaccttggtt taatgttaaa cantggagca 180
ngtcctganc gggcacggcc angcctggag gancggccgc acacacancc angcgcnagg 240
ctccctgcgg gacctcngga agggggaana gcgtcaacaa tttacggngg gtccaaccgc 300
tgggtcaaat tgagacaaac cantgtgtgg ttgggttcgg gtcancangc tggananggt 360
tcngttcntt ttgatcanta ncntttgggg ccccaaggga nggtcntggg anccacctga 420
nccccaaagc tgggaaattc ctcaaagctg cncatgtcaa gagccttcnc antgctgctg 480
gcggtccaag gtgcgtcccg caccacaaag cctctggaag gngccntggc ctcttcctgt 540
gccgggggtt tcatgtntac ctgcancgcc tcactgtcca ccaangtcag ctaactgcag 600
gcnnaagaca ggaatnacag ggtcagtctg cccaacaacc ccancatccc ggcccgccct 660
ggctcaaacc ctgcaacctt gcctgccttc cgggaancac aatttcccac ccttgtnccc 720
ctgaaanccn cctggnctgg ggccntcaaa ggccgttgga ncttccanag gncnccccca 780
ggggntccca angggcccac aa 802

<210> 189
<211> 807
<212> DNA
<213> Homo Sapiens

<400> 189
aaaatggcgg cggcagcggt gtcgctttgt ttccgcggct cctgcggcgg tggcagtggt 60
agcggccttt gagctgtggg gaggttccag cagcagctac agtgacgact aagactccag 120
tgcatttcta tcgtaaccgg gcgcgggggа gcgcagatcg gcgcccagca atcacagaag 180
ccgacaaggc gttcaagcga aaacatgacc gctgagccca tgagtgaaag caagttgaat 240
acattggtgc agaagcttca tgacttcctt gcacactcat cagaagaatc tgaagaaaca 300
agttctcctc cacgacttgc aatgaatcaa aacacagata aaatcagtgg ttctggaagt 360
aactctgata tgatggaaaa cagcaaggaa gagggaacta gctcttcaga aaaatccaag 420
tcttcaggat cgtcacgatc aaagaggaaa ccttcaattg taacaaagta tgtagaatca 480
gatgatgaaa aacctttgga tgatgaaact gtaaatgaag atgcgtctaa tgaaaattca 540
gaaaatgata ttactatgca nagcttgcca aaaggtacag tgattgttca gccagagcca 600
gtgctgaatg aagacaaaga tgattttaaa ggggcctgaa tttagaagca gaagttaaaa 660
tgaaaactga naatctcaaa aaacgccgga gaanatgggc ttcatgggga ttgtgangcc 720
tgcactggcn tggtggacaa caaggtcaat caatttcaaa aaggttccat ttatagacaa 780
cccttcaatg caaggtcnta tttgtta 807

<210> 190
<211> 608
<212> DNA
<213> Homo Sapiens

<400> 190
ccagttcttt ttttcccttc ttctggctca tcatctgaag atccatcctc atcagaggaa 60
agattggctt taatttcttc taaaagcatc ttcttggcaa ttctattctc aggatcattg 120
tcgtcatcat catcatccac tgtgacaggc actgatttag ataaggcttc atctcctgaa 180
gattggcaaa atccagtatg tgaagacagc actaaatttt cagtcacagg cttaattttc 240
tgttcatcgc tgcttccctc acctatagaa ttctgatcat catcttctat atcagaagaa 300
gatgaggatg taatgtcagc ttgcttcctt ttagtgcttg ttcttaggga gtttctcttt 360
ttctccttga caatgactgc cttcttttta gatgaagttc tttgcttctt ctttttacta 420
tcttcangaa ctttcctcag catcagatga tgatgangcc actttgtatt tccttagtat 480
ttctctttga acttaaattt cttctttccc tcaattcgag tcttttcagt caccttatca 540
gaagagttac aancatcttc tttcatggga agtatcaaga tgatgaacaa tcttgtcnct 600
tccttgaa 608

<210> 191
<211> 786
<212> DNA
<213> Homo Sapiens

<400> 191
gcactttgct gatggtggac agtgaggagg agtacttccc tgaagagatc gccaagctcc 60
ggagggacgt ggacaacggc ctctcgctcg tcatcttcag tgactggtac aacacttctg 120
ttatgagaaa agtgaagttt tatgatgaaa acacaaggca gtggtggatg ccggataccg 180
gaggagctaa catcccagct ctgaatgagc tgctgtctgt gtggaacatg gggttcagcg 240
atggcctgta tgaaggggag ttcaccctgg ccaaccatga catgtattat gcgtcagggt 300
gcagcatcgc gaagtttcca gaagatggcg tcgtgataac acagactttc aaggaccaag 360
gattggaggt tttaaagcag gaaacagcag ttgttgaaaa cgtccccatt ttgggacttt 420
atcagattcc agctgagggt ggaggccgga ttgtactgta tggggactcc aattgcttgg 480
atgacagtca ccgacagaag gactgctttt ggcttctgga tgccctcctc cagtacacat 540
cgtatggggt gacaccgcct agcctcagtc actctgggaa ccgccagcgc cctcccantt 600
ggagcaagct cagtcactcc agagaggatg gaaggaaacc atctcatcgg tactccaagg 660
ttctggangg ccatttggga aaaccaaaac ctcgggctcn acaaccctgt ccangcctgt 720
nctgggccaa gccaanagcc tttaaaccan aacggngccc aattaaccct ttggaaaaca 780
tcagaa 786

<210> 192
<211> 819
<212> DNA
<213> Homo Sapiens

<400> 192
gacgggtaat acatatttat tgaaaatttt cttcaccgac aatggtgaaa tcaagacctc 60
aaattacaaa acatggtggc aggtgatact tacaaaaata aagcgaaggt ctatgtttta 120
cagatttgtg catgtttcct tcaaatctca gtctgtactg tcattaaaaa gatcatggaa 180
tctatgttgt tcctcatgat ggaatagtaa aaaaactgca ttccactgac aaaaaaaata 240
gctttgcttc caaatagcac aagtctttaa agtgactttt cccaacaata aatatagaaa 300
atagccttta acaagcgtct tttagcttgg tcagggttgt atcatttgtt tggaaagtac 360
atccttcccc tgcagtcaga agaccccaga cagcctttcc agttctcccg agtctttggt 420
gcgcacagct gccggcggga agtctcactg gcggcagagc cactaagtcc ctcctgacgg 480
gatccacagg aatctttctcg atgtaccagg agcctctgcc catcacagga gggcaggccc 540
atgtagaaca agactctaac aaacctgcag ctggaaactg gattcctttt aaaccaaccc 600
gccaacacag ctcggntcac ccaccancgc cgtccgtnaa aggggctctc tgggcctcac 660
gggtcagcca ggttgccggt cacaccgaaa ggggtccttg ggcgggtgaa cctgctgcat 720
gaanctggcg gggngcttca accctgggct tcctccggct ttcggcctgg ncctgggcct 780
tgttgaantt gntccacaaa agaaaggcca ggagcaaca 819

<210> 193
<211> 744
<212> DNA
<213> Homo Sapiens

<400> 193
cagtcccagc acaacctgca ggggcatctg tccagcctgt tggccaggct ccggcagcag 60
tgtctgctgt acctactggc agtcagattg caaatattgg tcagcaagca aacataccta 120
ctgcagtgca gcagccctct acccaggttc caccttcagt tattcagcag ggtgctcctc 180
catcttcgca agtggttcca cctgctcaaa ctgggattat tcatcaggga gttcaaacta 240
gtgctccaag ccttcctcaa caattggtta ttgcatccca aagttccttg ttaactgtgc 300
ctccccagcc acaaggagta gaatcagtag ctcaaggaat tgtttcacag cagttgcctg 360
cagttagttc tttgccctct gctagtagta tttctgttac aagtcaggtt agttcaactg 420

gtccttctgg aatgccttct gccccaacaa acttggttcc accacaaaat atagcacaaa 480
cccctgctac ccaaaatggt aatttggttc aaagtgttaa gtcaacctcc cttgatagca 540
actaatacaa atttgccttt ggcacaacag ataccactaa gttctaccca agttctccgc 600
acaatcatta gctcaggcaa ttggaagcca aattgaagat gccaggcgtt gcagcggagc 660
cctccttaag ttggcttacc tcaagactaa tcagttggtg acaattgggg ggaatgttca 720
gcaagtttca agattgggaa gtta 744

<210> 194
<211> 567
<212> DNA
<213> Homo Sapiens

<400> 194
atcaacattt atatgcttta ttgaaagttg acaagtgcaa cagttaaata cagtgacacc 60
ttacaattgt gtagagaaca tgcacagaaa catatgcata taactactat acaggtgata 120
tgcagaaacc cctactggga aatccatttc attagttaga actgagcatt tttcaaagta 180
ttcaaccagc tcaattgaaa gacttcagtg aacaaggatt tacttcagcg tattcagcag 240
ctagatttca ggattacaca aagtgagtaa ctgtgccaaa ttcttaaaat ttctttaggt 300
gtggtttttg tcatgtagca gtttttatgt agatcnatat ntaaaagtcc acacctcctc 360
agacangcca atgaaacnac taaatttcaa tctgtacaan ctaaatagta attacagtcc 420
tctangtgnn caangatact tacaccacat anacaaatnt acnntacgca naacaacctt 480
catggggaag gatagcccta ggtccccagc tancctgtca ccatttttgt cactctcata 540
gttttggtgt ccaatccatt ggttttg 567

<210> 195
<211> 771
<212> DNA
<213> Homo Sapiens

<400> 195
gagagaacag agcaacaaga gcacaaagaa aaaaagaaga aatgaacaga ataagaacat 60
tagttgacaa tgcatacagc tgtgatccaa ggataaaaaa gttcaaggaa gaagaaaaag 120
ccaagaaaga ancanaaaag aaagcaaaag cagaagctaa acggaaggag caagaagcta 180
aagaaaaaca aagacaagct gaattagaag ctgctcggtt agctaaggag aaagaagagg 240
aggaagtcag acagcaagca ttgctggcaa agaaggaaaa agatatccag aaaaaagcca 300
ttaagaagga aaggcaaaaa tttcgaaact catgcaagac ctggaatcat ttttctgata 360
atgaggcaga gcgggttaaa atgatggaag aagtggaaaa actttgtgat cggcttgaac 420
tggcaagctt acagtgcttg aatgaaacac tcacatcatg cacaaaagaa gtnggaaagg 480
ctgctttgga aaaacagata gaagaaataa atgagcaaat cagaaaagag aaagaggaag 540
ctgaggctcg tatgcgacaa gcatctaaga acacagagaa atcaactggt ggaaggtgga 600
aaatggaagt aaaaattggg cacaaagatg ntctacaatt actaatttna aagctgtgaa 660
tcctgttncc tgctggaaca aantcaagat gggaagttat tgccaantac atgaacatac 720
attcctcccn cngggngtcc aaaaagaaac tgccaaaagn atgtttattg g 771

<210> 196
<211> 561
<212> DNA
<213> Homo Sapiens

<400> 196
acagtatttt cagttttatt ataaaaatgc acacacaaca aagattgtca tttcttggct 60
ctacttgcat tcagcacttg ttcttgagca gctttctttg cttttaccat ctcgacaagt 120
tccttgtatc gtttcatgca gtccttcttt gtcctgccag gcaccgcttc tgctattttt 180
tcccatcttt caggtgtatt tactgggtat gttttcaaag cttgttccaa aagcttctgt 240
tcttctgttg tccaaggggt gaagtctgta tatggacctt caaatcgttc tgaaggcgtt 300

gcgttgtctg cttgaggtac cactccatgt tctttttga acttatcaaa tgccttttta 360
tttangtcag ctttttgatg agggtcaagt ttttggagac tctttgcttt gccaataaca 420
tctttggnan gttcttttga ctccaagagg aagaangtnt ngttcatgtn antangcaan 480
aacgtcccat ctggaanttt tgttcnacca gggaacanac tcacaagctt taactaagta 540
antgtngnat naccgncngn c 561

<210> 197
<211> 691
<212> DNA
<213> Homo Sapiens

<400> 197
cgccacaacc acaaccagca ccacagcctc caccacccca gcagcagccg caacagcagc 60
cgcagcctca gccccagcag cctccacccc caccccctcc ccagcagcag cccccgctgt 120
cacagtgtan tatgaataac agtttcaccc cagctcctat gatcatggag ataccagaat 180
ctggaagcac tgggaacata agtatctatg agaggattcc aggggatttt ggtgccggca 240
gctactctca accatcagcc accttcagcc tagccaagct gcagcagctg accaacacca 300
ttatggaccc tcatgccatg ccttatagcc attctcctgc tgtgacttcc tatgcaacca 360
gtgtttctct gtccaataca ggactggctc agctggctcc atctcatccc ttagctggga 420
ctcctcaagc acangccacc atgacgccac ccccaaactt ggcatccact accatgaacc 480
tcacatctcc tctgcttcag tgcaacatgt ctgccaccaa cattggcatt cctcacacgc 540
aggagattgc aagggcaaat gccagtgaag gggcacattt ccatccgctc caagtttggc 600
ggcactgccc tctgcngctg ctcaccanna ngcagctggt atgggccgtn tccccaatcg 660
ggcagtttgc caatgcaang gcttgggccc t 691

<210> 198
<211> 646
<212> DNA
<213> Homo Sapiens

<400> 198
acctatccct ggagcaagta ataggaagag aatgggcaaa ctggttgcac gagagaaaag 60
agaatggagt tgggagcaac acatgaactt gcgttataac attctgctgt ccagatctgc 120
cctactgtgc tggtggtcgg tctgtccctc ttctcattag ccactcacag gagaggtgct 180
tgtgcactct gattcacagg ggatgaactc aggatctcaa aagacataca aaaactanag 240
gtatgtatca cttaagtagc tacgaaactc acaccgtgat ctcccttctg acacacatct 300
gcgccatctc ttccaacata aaatanactg tttcaatggt ttgtcagtta tttttcaaat 360
cactaanatg tacagtcatc caccaacaat ttaagaaaga acctaagagg caaatcactg 420
gggactgcta tttgagtttt atcagtcaaa ggctcaagca tcaanaccct cagttancat 480
ttcaaagtac atactangaa acancgaggc tgggtggcgt tgtgtgcgtt anggctgatt 540
caccaggtgg taaancaaca aagnggttaa gnctccnctt tttggattgt taattgncca 600
tcctcnattc ctccaaaagg gctgggattt ggatttggca aagtca 646

<210> 199
<211> 811
<212> DNA
<213> Homo Sapiens

<400> 199
cggcggcgct ccaggtgctg acagcgcgag agagcgcggc cctcaggagc aaggcgaatg 60
tatgacaaca tgtccacaat ggtgtacata aaggaagaca agttggagaa gcttacacag 120
gatgaaatta tttctaagac aaagcaagta attcaggggc tggaagcttt gaagaatgag 180
cacaattcca ttttacaaag tttgctggag acactgaagt gtttgaagaa agatgatgaa 240
agtaatttgg tggaggagaa atcaaacatg atccggaagt cactggagat gttggagctc 300
ggcctgagtg aggcacaggt tatgatggct ttgtcaaatc acctgaatgc tgtggagtcc 360

gagaagcaga aactgcgtgc gcaggttcgt cgtctgtgcc aggagaatca gtggctacgg 420
gatgaactgg ccaacacgca gcagaaactg cagaagagtg agcagtctgt ggctcaactg 480
gaggaggaga agaagcatct ggagtttatg aatcagctaa aaaaatatga tgacgacatt 540
tccccatccg aggacaaaga cactgattct accaaagagc ctctggatga ccttttcccc 600
aatgatgaag acgacccagg gcaaggaatc cagcagcagc acagcagtgc agccgcggct 660
gcccagcaag gcngctacna agattcccgc gcggctgcgg acgctccaca acctgggtga 720
ttcagttcgc ctcnncangg ggccgctacc aaggtaacct gttgcccccc cctggcaaag 780
caaggnccct gggaagggan cctgggagga a 811

<210> 200
<211> 763
<212> DNA
<213> Homo Sapiens

<400> 200
acacagtaaa tggattttat taatacagtt tatattacta agtacatatc tggcaaagct 60
acatgtatac agaaatcagg aacccccccа aaaaggacag cagcaccgaa aggaatggcc 120
agttcacaga gaggtgcagc tctgacaaga tcctagaggc tgctagacac agcgggcagc 180
actggagaga gaagggaagc tgcgggaggc gccacccgtc atgcaggaga cagtgtgaga 240
gtcacgggcg gctaggccat gggacgctga gcaagtcagt taaccagccc gagcttcatt 300
ttcctcattt cctcccctcc gtcagggcca ctctcgtact tgaccacgtc cacgttgagg 360
ctctcacggc tcctgcgctt ctccatgttc tcagggtcat tgagcacttc tgccaccctc 420
tgtttgtgaa cattgtcaag accctgttta cgagacctca tagcagcttc ttctaacgtt 480
tctgcagctt caaatttgcc ttgacgtctg taaagtgccc caaggttttt tagagtggtt 540
gtaacagttg gnctatcaac tttgcangct ttgtaccaac cgccatactc tccaaaaaga 600
tgtcccatcc ttttgctttc ctttgcattc ttctctttcc tcaacaatgc atccaaatgg 660
gtttaatttc aacatctaca gaaccaaact ccctttcatg tgcacaagtg agaatcnctt 720
tgtacantgt ttccgccttc cttgaacntt ccctgtttca aaa 763

<210> 201
<211> 717
<212> DNA
<213> Homo Sapiens

<400> 201
ggcgaatgta tgacaacatg tccacaatgg tgtacataaa ggaagacaag ttggagaagc 60
ttacacagga tgaaattatt tctaagacaa agcaagtaat tcaggggctg gaagctttga 120
agaatganca caattccatt ttacaaagtt tgctggagac actgaagtgt ttgaagaaag 180
atgatgaaag taatttggtg gaggagaaat caaacatgat ccggaagtca ctggagatgt 240
tggagctcgg cctgagtgag gcacaggtta tgatggcttt gtcaaatcac ctgaatgctg 300
tggagtccga gaagcagaaa ctgcgtgcgc aggttcgtcg tctgtgccag gagaatcagt 360
ggctacggga tgaactggcc aacacgcagc aagaaactgc agaagagtga gcagtctgtg 420
gctcaactgg aggaggagaa gaagcatctg gagtttatga atcagctaaa aaaatatgat 480
gacgacattt ccccatccga gggacaaaga cactgattct accaaagagc ctccggatga 540
ccttttcccc aatgatgaag acgaccccag ggcaagggaa tccancagca gcacagcaan 600
ttgcagccgc ggctgcccaa gcaaggcggc tacgagattc ccgccgcggc tgccggacgc 660
tccacaacct ggtnatccaa tacgccctcn caaggggcgc taccaagggt aactgtt 717

<210> 202
<211> 647
<212> DNA
<213> Homo Sapiens

<400> 202
cagtcggagt gagtttatta gaagttagaa agacacaaat acacaaatca ctgagcactt 60

caagattagt agagaaaagc agaatgccca aatttcacac acagactaca cagcaaatgc 120
tactggggca tatcctaggg agacccggag tccgagcggg gcccccaggg ctctaagtac 180
cacggagcac gtgcggcaca tgccttgctg taaggcttag ttacgtcaac aggtcaccgt 240
catgccattg caacaacacc ttgtgtgaca cttaactacc tgttaccaaa gtgaacagct 300
aatcgctctt aatttttaaa ctcgtgtatt acacagtaaa tggattttan taatacagtt 360
tatattacta agtacatatc tggcaaagct acatgtatac agaaatcagg aacccccca 420
aaaaggacag cagcaccgaa aggaatggcc agttcacaga nangtgcagc tctgacaaga 480
tcctagangc tgctagacac agcgggcagc actggganaa gagaagggaa gctgcgggag 540
gcgccaaccc gtcatgccag gggacagtgt ganagtcacg ggncgggcta ngccaatggg 600
aacncctgan gcaangcagt ttaaccangc cccgnggctt caatttt 647

<210> 203
<211> 786
<212> DNA
<213> Homo Sapiens

<400> 203
cagccatgga cgccatcaag aagaagatgc agatgctgaa gctggacaag gagaacgcca 60
tcgaccgcgc cgagcaggcc gaagccgaca agaagcaagc tgaggaccgc tgcaagcagc 120
tggaggagga gcagcaggcc ctccagaaga agctgaaggg gacagaggat gaggtggaaa 180
agtattctga atccgtgaag gaggcccagg agaaactgga gcaggccgag aagaaggcca 240
ctgatgctga ggcagatgtg gcctccctga accgccgcat tcagctggtt gaggaggagc 300
tggaccgggc ccaggagcgc ctggctacag ccctgcagaa gctggaggag gccgagaagg 360
cggctgatga gagcgagaga ggaatgaagg tcatcgaaaa ccgggccatg aaggatgagg 420
agaagatgga actgcaggag atgcagctga aggaggccaa gcacatcgct gaggattcag 480
accgcaaata tgaagaggtg gccaggaagc tggtgatcct ggaaggagag ctggagcgct 540
cggaggagan ggctgaggtg gccgagagcc gagccagaca gctggaggag gaacttcgaa 600
ccatggacca ngccctcaag tccctgatgg cctcanagga ggagtattcc accaaagaag 660
attaatatga agaggagatn aaactgttgg anggagaagc tgaanggagg ctganacccc 720
aagcaaaagt ttgccnaaaa ggtctgtggg caaaaatttg ggngaaaaac catcnaatga 780
acctta 786

<210> 204
<211> 738
<212> DNA
<213> Homo Sapiens

<400> 204
ggctagtaac atcagtttta ttgggttggg gtggcaacca tagcctggct gggggtgggg 60
ctggccctca caggttgttg agttccagca gggtctggtc caaggtctgg tgaatctcga 120
cgttctcctc cttggcactg gccaaggtct cttctaggtc atcgatggtt ttctccaact 180
ttgccacaga cctctcggca aactctgctc gggtctcagc ctccttcagc ttctcctcca 240
acagtttgat ctcctcttca tatttatctt ctttggtgga atactcctcc tctgaggcca 300
tcagggactt gagggcctgg tccatggttc gaagttcctc ctccagctgt ctggctcggc 360
tctcggccac ctcagccctc tcctccgagc gctccagctc tccttccagg atcaccagct 420
tcctggccac ctcttcatat ttgcggtctg aatcctcagc gatgtgcttg gcctccttca 480
gctgcatctc ctgcagttcc atcttctcct catccttcat ggcccggttt tcnatgacct 540
tcattcctct ctcgctctca tcagcccgcc ttctcggctc ctccagcttc tgcanggctg 600
tanccaangc gctcctgggc ccggtcaanc tcctcctcaa caagctgaat gcggcggttc 660
aaggaaggca anatctgcct caacaacaat tggccttctt cncggccngc tccaatttc 720
nccnggggcc tccttcaa 738

<210> 205
<211> 818
<212> DNA

<213> Homo Sapiens

<400> 205

gctagtaaca tcagttttat tgggttgggg tggcaaccat agcctggctg ggggtggggc 60
tggccctcac aggttgttga gttccagcag ggtctggtcc aaggtctggt gaatctcgac 120
gttctcctcc ttggcactgg ccaaggtctc ttctaggtca tcgatggttt tctccaactt 180
tgccacagac ctctcggcaa actctgctcg ggtctcagcc tccttcagct tctcctccaa 240
cagtttgatc tcctcttcat atttatcttc tttggtggaa tactcctcct ctgaggccat 300
cagggacttg agggcctggt ccatggttcg aagttcctcc tccagctgtc tggctcggct 360
ctcggccacc tcagccctct cctccgagcg ctccagctct ccttccagga tcaccanctt 420
cctggccacc tcttcatatt tgcggtctga atcctcagcg atgtgcttgg cctccttcag 480
ctgcatctcc tgcagttcca tcttctcctc atccttcaag gcccggtttt cgatgancct 540
tcattcctct ctcggctctc atcagccgcc ttctcgggct cntccaagct tctgcaaggc 600
tgtanncann ggctcctggg gcccgggtnc aagntcctcc tcaaacangc tnaaatncca 660
gagggtttca nggaagggcc aaaatctggc ctnnagnatc aattggcttt cttncncggg 720
nctngcncca attttctccn ggggcctncc tttcangggg tnaagaanaa atttcaaatt 780
caacctcggt tccccttnaa cntcntnctg gaagggct 818

<210> 206
<211> 927
<212> DNA
<213> Homo Sapiens

<400> 206

cagccatgga cgccatcaag aagaagatgc agatgctgaa gctggacaag gagaacgcca 60
tcgaccgcgc cgagcaggcc gaagccgaca agaagcaagc tgaggaccgc tgcaagcagc 120
tggaggagga gcagcaggcc ctccagaaga agctgaaggg gacagaggat gaggtggaaa 180
agtattctga atccgtgaag gaggcccagg agaaactgga gcaggccgag aagaaggcca 240
ctgatgctga ggcagatgtg gcctccctga accgccgcat tcagctggtt gaggaggagc 300
tggaccgggc ccaggagcgc ctggctacag ccctgcagaa gctggaggag gccgagaagg 360
cggctgatga gagcgagaga ggaatgaagg tcatcgaaaa ccgggccatg aaggatgagg 420
agaagatgga actgcaggag atgcagctga aggaggccaa gcacatcgct gaggattcag 480
accgcaaata tgaagaggtg gccaggaagc tggtgatcct ggaaggagag ctggagcgct 540
cggaggagag ggctgaggtg gccgagagcc gagccagaca gctggaggag gaacttcgaa 600
ccatggacca ggccctcaag tccctgatgg cctcagagga ggagtattcc accaaagaag 660
ataaatatga agaggagatc aaactgttgg aggagaagct gaaggaggct gagacccgag 720
cagagtttgc cgagaggtct gtggcaaagt tggagaaaac catcgatgac ctagaagaga 780
ccttggccag tgccaaggag gagaacgtcg agattcacca gaccttggac cagaccctgc 840
tggaactcaa caacctgtga gggccagccc caccccagc caggctatgg ttgccacccc 900
aacccaataa aactgatgtt actagcc 927

<210> 207
<211> 910
<212> DNA
<213> Homo Sapiens

<400> 207

ggaagatggc ggcggccgtt ccacagcggg cgtggaccgt ggagcagctg cgcagtgagc 60
agctgcccaa gaaggacatt atcaagtttc tgcaggaaca cggttcagat tcgtttcttg 120
cagaacataa attattagga aacattaaaa atgtggccaa gacagctaac aaggaccact 180
tggttacagc ctataaccat ctttttgaaa ctaagcgttt taagggtact gaaagtataa 240
gtaaagtgtc tgagcaagta aaaaatgtga agcttaatga agataaaccc aaagaaacca 300
agtctgaaga gaccctggat gagggtccac caaaatatac taaatctgtt ctgaaaaagg 360
gagataaaac caactttccc aaaaagggag atgttgttca ctgctggtat acaggaacac 420
tacaagatgg gactgttttt gatactaata ttcaaacaag tgcaaagaag aagaaaaatg 480

ccaagccttt aagttttaag gtcggagtag gcaaagttat cagaggatgg gatgaagctc 540
tcttgactat gagtaaagga gaaaangctc gactggagat tgaaccagaa tgggcttacg 600
gaaagaaagg acagcctgat gccaaaattc caccaaatgc aaaactcact tttgaagtgg 660
nantatggga tattgattga aatagcagtg cntcagctcn aggntattag caacaatgat 720
taaaacntgg ncttgaaaga aaatttcaca actagttnag aaacttgtta ccaaatggta 780
aaggaaaaag tcaactggga aaaattcaag ggngttaana aaaanttggt ttacctgggg 840
cccaagcctt ttgngaaaaa aaaancccct tatgaaancc ccngggccca aaaanacttt 900
tccnaaaacc 910

<210> 208
<211> 745
<212> DNA
<213> Homo Sapiens

<400> 208
gacagtggat caatttttat tgagccactt aagtttacaa catgaggtaa aaggaaaaag 60
ttctccttga ccagtatttt acacagctgt aggaaagtat tttagaccag ggattcataa 120
gggatttatc tctcaaaagc tgggaccaag taaacaaatt ttattaactc cttgaatttt 180
ccagttgact cttcctttac aatagtaaca agttctaact agttgtgtaa atttcttcaa 240
ggccaagttt tatcattgtt gctaatatcc ttagagctga agcactgcta tttcaatcaa 300
tatccactaa ttccacttca aaagtgagtt ttgcatttgg tggaattttg gcatcaggct 360
gtcctttctt tccgtaagcc cattctggtt caatctccag tcgagccttt tctcctttac 420
tcatagtcaa gagagcttca tcccatcctc tgataacttt gcctactccg accttaaaac 480
ttaaaggctt ggcatttttc ttcttctttg cacttgtttg aatattagta tcaaaaacag 540
tcccatcttg tagtgttcct gtataccaag caagtgaaca acatcnccct ttttgggaaa 600
gttggtttaa ccccctttt cagaacagat ttaagtanat tttgggggac cctcanccaa 660
ggggtcnctt canaactggg tttccttggg gtttaacctt cattnagcct canaattttt 720
tacntggccn cagacacttt tactt 745

<210> 209
<211> 965
<212> DNA
<213> Homo Sapiens

<400> 209
ggaagatggc ggcggccgtt ccacagcggg cgtggaccgt ggagcagctg cgcagtgagc 60
agctgcccaa gaaggacatt atcaagtttc tgcaggaaca cggttcagat tcgtttcttg 120
cagaacataa attattagga aacattaaaa atgtggccaa gacagctaac aaggaccact 180
tggttacagc ctataaccat ctttttgaaa ctaagcgttt taagggtact gaaagtataa 240
gtaaagtgtc tgagcaagta aaaaatgtga agcttaatga agataaaccc aaagaaacca 300
agtctgaaga gaccctggat gagggtccac caaaatatac taaatctgtt ctgaaaaagg 360
gagataaaac caactttccc aaaaagggag atgttgttca ctgctggtat acaggaacac 420
tacaagatgg gactgttttt gatactaata ttcaaacaag tgcaaagaag aagaaaaatg 480
ccaagccttt aagttttaag gtcggagtag gcaaagttat cagaggatgg gatgaagctc 540
tcttgactat gagtaaagga gaaaaggctc gactggagat tgaaccaaga atgggcttac 600
ggaaagaaag gacagcctga tgccaaaatt ccaccaaatg caaaactcac ttttgaagtg 660
gaattagtgg atattgattg aaatagcagt gcttcagcct ccaagggata ttagcaacaa 720
tgaataaaac tttggncttg angaaaattt acacaaccta gtttagaacc ttgttactat 780
tgttaaagga aagaagtcaa ctgggnaaaa ttcaagggag ttaataaaat ttgtttactt 840
ggncccagcc ttttgagaga taaatccctt angaaancct ggtccnaaaa tactttccta 900
aagnctgtgt taaataccng ggncaagggn gaaacttttt ccctttaccn caagggtggt 960
aaact 965

<210> 210
<211> 867

<212> DNA
<213> Homo Sapiens

<400> 210
caagacagtg gatcaatttt tattgagcca cttaagttta caacatgagg taaaaggaaa 60
aagttctcct tgaccagtat tttacacagc tgtaggaaag tattttagac cagggattca 120
taagggattt atctctcaaa agctgggacc aagtaaacaa attttattaa ctccttgaat 180
tttccagttg actcttcctt tacaatagta acaagttcta actagttgtg taaatttctt 240
caaggccaag ttttatcatt gttgctaata tccttagagc tgaagcactg ctatttcaat 300
caatatccac taattccact tcaaaagtga gttttgcatt tggtggaatt ttggcatcag 360
gctgtccttt ctttccgtaa gcccattctg gttcaatctc cagtcgagcc ttttctcctt 420
tactcatagt caagagagct tcatcccatc ctctgataac tttgcctact ccgaccttaa 480
aacttaaagg cttggcattt ttcttcttct ttgcacttgt ttgaatatta gtatcaaaaa 540
cagtcccatc ttgtagtgtt cctgtatacc angcagtgaa caacatctcc ctttttggga 600
aagtttgggt ttaactccct tttttcagaa caagatttag taaaattttg gnnggaccct 660
caatccaagg gtctcttcaa nacttgggtt cctttggggt ttaancctca attaagcctc 720
acaatttttt acttggctca agaaancntt tacttaaacc tttcaggtac cctttaaaaa 780
nccttangtt ttaaaaaaaa tgggttataa gggctggtaa ccnaaggttg ggcccttggt 840
aaccngttct tggggcaaaa tttttaa 867

<210> 211
<211> 972
<212> DNA
<213> Homo Sapiens

<400> 211
ggaagatggc ggcggccgtt ccacagcggg cgtggaccgt ggagcagctg cgcagtgagc 60
agctgcccaa gaaggacatt atcaagtttc tgcaggaaca cggttcagat tcgtttcttg 120
cagaacataa attattagga aacattaaaa atgtggccaa gacagctaac aaggaccact 180
tggttacagc ctataaccat ctttttgaaa ctaagcgttt taagggtact gaaagtataa 240
gtaaagtgtc tgagcaagta aaaaatgtga agcttaatga agataaaccc aaagaaacca 300
agtctgaaga gaccctggat gagggtccac caaaatatac taaatctgtt ctgaaaaagg 360
gagataaaac caactttccc aaaaagggag atgttgttca ctgctggtat acaggaacac 420
tacaagatgg gactgttttt gatactaata ttcaaacaag tgcaaagaag aagaaaaatg 480
ccaagccttt aagttttaag gtcggagtag gcaaagttat cagaggatgg gatgaagctc 540
tcttgactat gagtaaagga gaaaaggctc gactggagat tgaaccagaa tgggcttacg 600
gaaagaaagg acagcctgat gccaaaattc caccaaatgc aaaactcact tttgaagtgg 660
aattagtgga tattgattga aatagcagtg cttcagctct aaggatatta gcaacaatga 720
taaaacttgg ccttgaagaa atttacacaa ctagttagaa cttgttacta ttgtaaagga 780
agagtcaact ggaaaattca aggagttaat aaaatttgtt tacttggtcc cagcttttga 840
gagataaatc ccttatgaat ccctggtcta aaatactttc ctacagctgt gtaaaatact 900
ggtcaaggag aacttttcc ttttacctca tgttgtaaac ttaagtggct caataaaaat 960
tgatccactg tc 972

<210> 212
<211> 817
<212> DNA
<213> Homo Sapiens

<400> 212
aacggctcta agggttatgc ctttgtccac ttcgagaccc aagaggctgc cgacaaggcc 60
atcgagaaga tgaatggcat gctcctcaat gaccgcaaag tatttgtggg cagattcaag 120
tctcgcaaag agcgggaagc tgagcttgga gccaaagcca aggaattcac caatgtttat 180
atcaaaaact ttggggaaga ggtggatgat gagagtctga aagagctatt cagtcagttt 240
ggtaagaccc taagtgtcaa ggtgatgaga gatcccaatg ggaaatccaa aggctttggc 300

tttgtgagtt acgaaaaaca cgaggatgcc aataaggctg tggaagagat gaatggaaaa 360
gaaataagtg gtaaaatcat atttgtaggc cgtgcacaaa agaaagtaga acggcaggca 420
gagttaaaac ggaaatttga acagttgaaa caggagagaa ttagtcgata tcaggggtg 480
aatctctaca ttaagaactt ggatgacact attgatgatg agaaattaag gaaagaattt 540
tctccttttg gatcaattac cagtgctaag gtaatgctgg aggatggaag aagcaaaggg 600
tttggcttcg tctgcttctc atctcctgaa gaancaacca aagcagtcac tggagatgaa 660
tggacgcatt ttggggctcc aaccactata tgttgccctg gccccanagg aagggaanag 720
agaaaggntc accttgacca accagtttta tgcaacgaan tggctgggaa tngagaacca 780
cttcccngcc aatgccaatc tttaaantca gnttcca 817

<210> 213
<211> 756
<212> DNA
<213> Homo Sapiens

<400> 213
ctttgatgtg attaagggaa agccaatccg catcatgtgg tctcagaggg atccctcttt 60
gagaaaatct ggtgtgggaa acgtcttcat caagaacctg gacaaatcta tagataacaa 120
ggcactttat gatacttttt ctgcttttgg aaacatactg tcctgcaagg tggtgtgtga 180
tgagaacggc tctaagggtt atgcctttgt ccacttcgag acccaagagg ctgccgacaa 240
ggccatcgag aagatgaatg gcatgctcct caatgaccgc aaagtatttg tgggcagatt 300
caagtctcgc aaagagcggg aagctgagct tggagccaaa gccaaggaat tcaccaatgt 360
ttatatcaaa aactttgggg aagaggtgga tgatgagagt ctgaaagagc tattcagtca 420
gtttggtaag accctaagtg tcaaggtgat gagagatccc aatgggaaat ccaaaggctt 480
tggctttgtg agttacgaaa aacacgagga tgccaataag gctgtggaag agatgaatgg 540
aaaagaaata agtggtaaaa tcatatttgt aggccgtgca caaaagaaag tagaacggca 600
agcagagtta aaacggaaat ttgaacagtt gaaacaggag agaattagtc gatatcangg 660
ggtgaatccc cacattaaga acttggatga cactattgat gatgaagaaa attaaggaaa 720
agaattttcn ccntttggga tnaattaaca agttgc 756

<210> 214
<211> 728
<212> DNA
<213> Homo Sapiens

<400> 214
atggagattt tttttcttta ttgggaaacg taagacttgg gtacatcaaa taaaaccaat 60
ttctgggggga aaaaatcaaa ncccacaata aaaaaaaagt taacactgtc tgggccacag 120
cagaacccaa agaacatatt cgtataattg aaaaattcta ggtgcttcat aattgacctt 180
ttgatacaaa atgacctatt aaatttgcaa tttgtaatcc ttggtgttga ggtccatagg 240
acaagctagg aagtcttcaa accttgagtt gaattccata aggggttatt tggcttttga 300
atcggttttt ccttgtctaa gaggtagcag cagcaacagc gcccaccttc tgggcagctt 360
ctttcttggc atgatgagcc tgtagaactg ctacagcttc atccaccttg gagcggagag 420
actcgggggа ctctaacatg tgcagcagct canagttgtc tatctccagc agcattcccg 480
tgatcttccc agccagattt gaatgcattg tttggatgan tgggaacaag cgttctccca 540
gcatctgctt ctgttcctgg gggggtgctg canccaacag gaggcaatca ntggntccng 600
gccctgcaca tggaccgcaa ggctggggtg cctgcaaaan gctgtatggc aaggatgaag 660
ggctgccgac actgggaagg cggtattngt agggggggcaa aaancccggg gaagcancag 720
caacaaca 728

<210> 215
<211> 710
<212> DNA
<213> Homo Sapiens

<400> 215
atgganattt tttttcttta ttgggaaacg taagacttgg gtacatcaaa taaaaccaaa 60
atctggggga aaaaatcaaa acccacaata aaaaaaaagt taacactgtc tgggccacag 120
canaacccaa agaacatatt cgtataattg aaaaattcta ggtgcttcan aattgacctt 180
ttgatacaaa atgacctatt aaatttgcaa tttgtaancc ttggtgttga ggtccatagg 240
acaagctagg aagtcttcaa accttgagtt gaattccana aggggttatt tggcttttga 300
atcggttttt ccttgtctaa naggtagcag cagcaacagc gcccaccttc tgggcagctt 360
ctttcttggc atgatgagcc tgtanaactg ctacagcttc atccaccttg gagcgganag 420
actcggggga ctctaacatg tgcagcagct canagttgtc tatctccagc agcattcccg 480
tgatcttccc agccagattt gaatgcattg tttggatgan tgggaacaag cgttctccca 540
gcatctgctt ctgttcctgn gggggtgctg canccangca tggaggcaan tcagtggctc 600
ctgcccctgc acaatggacc gcaaggctgg ggggtgcctg canaaggctg tttgggcaag 660
gangaagggc ctgcggaana ctgggangcg tatttgttan ggggggcaaa 710

<210> 216
<211> 824
<212> DNA
<213> Homo Sapiens

<400> 216
catggcctcc ctgtacgtgg gcgacctgca ttcggacgtc accgaggcca tgctgtacga 60
aaagttcagc cccgcggggc ctgtgctgtc catccgggtc tgccgcgata tgatcacccg 120
ccgctccctg ggctatgcct acgtcaactt ccagcagccg gccgacgctg agcgggcttt 180
ggacaccatg aactttgatg tgattaaggg aaagccaatc cgcatcatgt ggtctcagag 240
ggatccctct ttgagaaaat ctggtgtggg aaacgtcttc atcaagaacc tggacaaatc 300
tatagataac aaggcacttt atgatacttt ttctgctttt ggaaacatac tgtcctgcaa 360
ggtggtgtgt gatgagaacg gctctaaggg ttatgccttt gtccacttcg agacccaaga 420
ggctgccgac aaggccatcg agaagatgaa tggcatgctc ctcaatgacc gcaaagtatt 480
tgtgggcaga ttcaagtctc gcaaagagcg ggaagctgag cttggagcca aagccaagga 540
attcaccaat gtttatatca aaaactttgg ggaanaggtg gatgatgaga gtctgaaaga 600
agctattcan tcaagtttgg taagacccta agtgtcaang tgatgagaga tccaatggga 660
aatccaaaag gctttgggct ttgtgagttn acgaaaaaca cnaggatgcc aataaggctg 720
ttggaaagaa atgaatggga aaagaaataa antggtaaaa tcataatttg tagggccgtn 780
cacaaaaaga aagtttaaac gggnaggcaa aatttaaaac cggg 824

<210> 217
<211> 749
<212> DNA
<213> Homo Sapiens

<400> 217
atggagattt tttttcttta ttgggaaacg taagacttgg gtacatcaaa taaaaccaat 60
ttctgggggga aaaaatcaaa acccacaata aaaaaaaagt taacactgtc tgggccacag 120
cagaacccaa agaacatatt cgtataattg aaaaattcta ggtgcttcat aattgacctt 180
ttgatacaaa atgacctatt aaatttgcaa tttgtaatcc ttggtgttga ggtccatagg 240
acaagctagg aagtcttcaa accttgagtt gaattccata aggggttatt tggcttttga 300
atcggttttt ccttgtctaa gaggtagcag cagcaacagc gcccaccttc tgggcagctt 360
ctttcttggc atgatgagcc tgtagaactg ctacagcttc atccaccttg gagcggagag 420
actcggggga ctctaacatg tgcagcagct cagagttgtc tatctccagc agcattcccg 480
tgatcttccc agccaagatt tgaatgcatt gtttggatga gtgggaacaa gcgttctccc 540
agcatctgcn tctgttcctg gggggtgct gcatccagca tgggangcan tcagtggctc 600
ctgcccctgc acatgggacc gcaaggctgg ggtgcctgca naggctgtat gggaaggatg 660
nagggctgcc ggncaactgg ganggcgtat ttgtaggggg caaacaagcc cggggaagca 720
nccagcagca acancaacng cttggcgcc 749

<210> 218
<211> 600
<212> DNA
<213> Homo Sapiens

<400> 218
ctttattggg aaacgtaaga cttgggtaca tcaaataaaa ccaatttctg ggggaaaaaa 60
tcaaaaccca caataaaaaa aaagttaaca ctgtctgggc cacagcagaa cccaaagaac 120
atattcgtat aattgaaaaa ttctaggtgc ttcataattg acctttgat acaaaatgac 180
ctattaaatt tgcaatttgt aatccttggt gttgaggtcc ataggacaag ctaggaagtc 240
ttcaaacctt gagttgaatt ccataagggg ttatttggct tttgaatcgg tttttccttg 300
tctaagaggt agcancagca acagcgccca ccttctgggc agcttctttc ttggcatgat 360
gancctgtag aactgctaca gcttcatcna ccttggagcg gngagactcg ggggactcta 420
acatgtgcag cagctcagag ttgtcnatct ccaagcagca ttcccgtgat cttcccagcc 480
anatttgaat gcattgtttg ggatgangtg gggaanaagc gttctcncag cannengctt 540
cnggtnccnn ggaggggggt gcntgcaagc ccagcattga aggcaagttc antggctcct 600

<210> 219
<211> 1077
<212> DNA
<213> Homo Sapiens

<400> 219
catggcctcc ctgtacgtgg gcgacctgca ttcggacgtc accgaggcca tgctgtacga 60
aaagttcagc cccgcggggc ctgtgctgtc catccgggtc tgccgcgata tgatcacccg 120
ccgctccctg ggctatgcct acgtcaactt ccagcagccg gccgacgctg agcgggcttt 180
ggacaccatg aactttgatg tgattaaggg aaagccaatc cgcatcatgt ggtctcagag 240
ggatccctct ttgagaaaat ctggtgtggg aaacgtcttc atcaagaacc tggacaaatc 300
tatagataac aaggcacttt atgatacttt ttctgctttt ggaaacatac tgtcctgcaa 360
ggtggtgtgt gatgagaacg gctctaaggg ttatgccttt gtccacttcg agacccaaga 420
ggctgccgac aaggccatcg agaagatgaa tggcatgctc ctcaatgacc gcaaagtatt 480
tgtgggcaga ttcaagtctc gcaaagagcg ggaagctgag cttggagcca aagccaagga 540
attcaccaat gtttatatca aaaactttgg ggaagaggtg gatgatgaga gtctgaaaga 600
gctattcagt cagtttggta agaccctaag tgtcaaggtg atgagagatc ccaatgggaa 660
atccaaaggc tttggctttg tgagttacga aaaacacgag gatgccaata aggctgtgga 720
agagatgaat ggaaaagaaa taagtggtaa aatcatattt gtaggccgtg cacaaaagaa 780
agtagaacgg caagcagagt taaaacggaa atttgaacag ttgaaacagg agagaattag 840
tcgatatcan ggggtgaatc cccacattaa gaacttggat gacactattg atgatgagaa 900
attaaggaaa gaattttctc cttttggatc aattaccagt gctaaggtaa tgctggagga 960
tggaagaagc aaagggtttg gcttcgtctg cttctcatct cctgaagaan caaccaaagc 1020
agtcactgga gatgaatgga cgcattttgg ggctccaacc actatatgtt gccctgg 1077

<210> 220
<211> 1007
<212> DNA
<213> Homo Sapiens

<400> 220
actacatcga tcgcgtggac gagcccttgt cctgctctta tgtgctgacc attcgcactc 60
ctcggctctg cccccaccct ctcctccggc ccccacccag tgctgcaccg caggccatcc 120
tctgtcaccc ttccctacag cctgaggagt acatggccta cgttcagagg caagccgact 180
caaagcagta tggagataaa atcatagagg agctgcaaga tctaggcccc caagtgtgga 240
gtgagaccaa gtctggggtg gcaccccaaa agatggcagg tgcgagcccg accaaggatg 300
acagtaagga ctcagatttc tggaagatgc ttaatgagcc agaggaccag gccccaggag 360
gggaggaggt gccggctgag gagcaggacc caagccctga ggcagcagat tcagcttctg 420

gtgctcccaa tgattttcag aacaacgtgc aggtcaaagt cattcgaagc cctgcggatt 480
tgattcgatt catagaggag ctgaaaggtg gaacaaaaaa ggggaagcca aatataggcc 540
aagagcagcc tgtggatgat gctgcagaag tccctcagag ggaaccagag aaggaaaggg 600
gtgatccaga acggcagaga gagatggaag aagaggagga tgaggatgag gatgaggatg 660
aagatgagga tgaacggcag ttactgggag aatttgagaa ngaactggaa gggatcctgc 720
ttccgtcaga ccgagaccgg ctccgttcgg aggtgaangc tggcatggag ccgggaactg 780
gnaaacatca tccaggagac angagaaaga nctgggaccc anatggggct gaagaangga 840
tcagaatccg ggatcgggca atgctggctc tcaaaatcaa ctctcaacaa antcattaaa 900
aagactggag ggaaaaacaa gagttccaaa ncctggtgaa nnaagcncat aaaaaagaag 960
gttgtcccaa aaaagnctcc cccatcaanc caaccctnca gggaaaa 1007

<210> 221
<211> 833
<212> DNA
<213> Homo Sapiens

<400> 221
ccgactcaaa gcagtatgga gataaaatca tagaggagct gcaagatcta ggcccccaag 60
tgtggagtga gaccaagtct ggggtggcac cccaaaagat ggcaggtgcg agcccgacca 120
aggatgacag taaggactca gatttctgga agatgcttaa tgagccagag gaccaggccc 180
caggagggga ggaggtgccg gctgaggagc aggacccaag ccctgaggca gcagattcag 240
cttctggtgc tcccaatgat tttcagaaca acgtgcaggt caaagtcatt cgaagccctg 300
cggatttgat tcgattcata gaggagctga aaggtggaac aaaaaagggg aagccaaata 360
taggccaaga gcagcctgtg gatgatgctg cagaagtccc tcagagggaa ccagagaagg 420
aaaggggtga tccagaacgg cagagagaga tggaagaaga ggaggatgag gatgaggatg 480
aggatgaaga tgaggatgaa cggcagttac tgggagaatt tgagaangaa ctggaaggga 540
tcctgcttcc gtcagaccga gaccggctcc gttcggaggt gaangctggc atggagccgg 600
gaactggnaa acatcatcca ggagacanga gaaaganctg ggacccanat ggggctgaag 660
aanggatcag aatccgggat cgggcaatgc tggctctcaa aatcaactct caacaaantc 720
attaaaaaga ctggagggaa aaacaagagt tccaaancct ggtgaannaa gcncataaaa 780
aagaaggttg tcccaaaaaa gnctccccca tcaanccaac cctncaggga aaa 833

<210> 222
<211> 745
<212> DNA
<213> Homo Sapiens

<400> 222
ggattgatgg tccagttgtt tatttagaaa cctgattgtt caagaacatg gtgggtgctt 60
cacacctttt tcactgggat tgtgctggag gtgataggca gcattctacc atttcctcag 120
caacagaggt gaaggctcct caactcagaa gcacaaattg taggggacag ggtgggcagg 180
gaaagggaga aggaaatccc aaggcaattc aatagaagag ggtaaaacga ctccaaacat 240
cactaagggc aggtgggggc ctgcttgctc agtgcctgct aagtgtcctg ccctccttgc 300
tctctctacc cacctccact caaaagatcc tactgaatct ccaggtaggc agcagggaat 360
atcctatcat taggggacaa taacaggaaa agccacagag gagaggaaga ggattgagtg 420
agagttcagg agagcaaata tcacaggccc ggtgaggtct caaggtggct gccagcaggg 480
gcagcaagca ttcacccagg gcccccacac ccacagagtt gcccgagang tccacaagct 540
cagctccact ctgctgtttg gccctcaagg gttccagggt ggggaagtgg ggaagaggca 600
ngccagtcca ggaagatctg gattccgtga angggtcaag tgtagtgttg gtctcagaag 660
tcaaattntc caagtcccct gttgccctcc ccacctggag aagccccana cccggnggta 720
attgctcncc anctccttct gccgc 745

<210> 223
<211> 747
<212> DNA

<213> Homo Sapiens

<400> 223

actacatcga tcgcgtggac gagcccttgt cctgctctta tgtgctgacc attcgcactc 60
ctcggctctg cccccaccct ctcctccggc ccccacccag tgctgcaccg caggccatcc 120
tctgtcaccc ttccctacag cctgaggagt acatggccta cgttcagagg caagccgact 180
caaagcagta tggagataaa atcatagagg agctgcaaga tctaggcccc caagtgtgga 240
gtgagaccaa gtctggggtg gcaccccaaa agatggcagg tgcgagcccg accaaggatg 300
acagtaagga ctcagatttc tggaagatgc ttaatgagcc agaggaccag gccccaggag 360
gggaggaggt gccggctgag gagcaggacc caagccctga ggcagcagat tcagcttctg 420
gtgctcccaa tgattttcag aacaacgtgc aggtcaaagt cattcgaagc cctgcggatt 480
tgattcgatt catagaggag ctgaaaggtg gaacaaaaaa ggggaagcca aatataggcc 540
aagagcagcc tgtggatgat gctgcagaag tccctcagag ggaaccagag aangaaaggg 600
gtgatccaga acggcagaga gagatgggaa ngaagangan gatgaggatg aggatgaggg 660
atgaaagann aaggatgaaa cgggcaagtt actggggaan aattttgana aagggaactg 720
ggaaagggat tcctggcttt ccgttca 747

<210> 224
<211> 618
<212> DNA
<213> Homo Sapiens

<400> 224

gatggtccag ttgtttattt agaaacctga ttgttcaaga acatggtggg tgcttcacac 60
ctttttcgct gggattgtgc tggaggtgat aggcagcatt ctaccatttc ctcagcaaca 120
gaggtgaagg ctcctcaact cagaagcaca aattgtaggg gacagggtgg gcagggaaag 180
ggagaaggaa atcccaaggc aattcaatag aagagggtaa aacgactcca aacatcacta 240
agggcaggtg ggggcctgct tgctcagtgc ctgctaagtg tcctgccctc cttgctctct 300
ctacccacct ccactcaaaa gatcctactg aatctccagg tangcancan ggaatatcct 360
atcattaggg gacaatanca ggaaaagcca cagaggagag gaagaggatt gagtganaag 420
ttcangacag caaattatca caggcccggt gaggtctcaa ngtgngctgc caacaagggg 480
caancagcat tcacccangg gccccacacc cacnnnagtt gccccagagg tccacanctc 540
ancctcccan ctgccngttt ggccctcaag gggttccaan gttcgngaaa gtgggggagg 600
aaggcanccc antcccag 618

<210> 225
<211> 765
<212> DNA
<213> Homo Sapiens

<400> 225

caaacatcag agactgcatg ctggagagaa acttgaagaa tgtgagaaaa ccttcagcaa 60
ggatgaggag cttagaaaag agcagagaac tcaccaggaa aagaaagttt attggtgtaa 120
tcagtgtagt aggaccttcc agggcagctc agatctcatc agacatcagg taactcatac 180
aagagagaaa ccatatgaat gtaaagaatg tgggaaaact caatcagagc tcagaccttc 240
tgagacatca tagaattcac agtggagaaa aaccttacgt atgcaataaa tgtggggaat 300
cttttaggag cagctcagat cttattaaac accatcgtgt tcatactgga gagaaacctc 360
atgaatgtag tgaatgtggg aaagtcttta gccagaggtc ccaccttgtc acacaccaga 420
aaatccacac tggagagaag ccctatcagt gcactgaatg tgaaaaagcc ttcaggcggc 480
gttcactcct tattcaacgt cggagaattc atagtggtga gaaaccctat gaatgtaagg 540
aatgtgggaa actcttcatg tggcacacag ctttcctcaa acatcagaga ctgcatgctg 600
gagagaaact tgaagaatgt gagaaaacct tcagcaagga tganggagct taggggagag 660
cagaaaattc accanggaag agaaagcctt attgggngta atcagtgtgg tanggctttc 720
caagggcagc tcangacctc atcgggccat caggtaactc aatac 765

<210> 226
<211> 791
<212> DNA
<213> Homo Sapiens

<400> 226
tggatccaaa gcacccctgg cactgttgtt tatggcccac ctcctgctgg ggcccccatg 60
gtgtatgggc ctccaccccc caacttctcc atccccttca tccctatggg tgtgctgcat 120
tgcaacgtcc ctgaacacca taacttagag aatgaagttt ctagattaga agacataatg 180
cagcatttaa aatcaaagaa gcgggaagaa aggtggatga gagcatccaa gcggcagtcg 240
gagaaagaaa tggaagaact gcatcataat attgatgatc ttttgcaaga gaagaaaagc 300
ttagagtgtg aagtagaaga attacataga actgtccaga aacgtcaaca gcaaaaggac 360
ttcattgatg gaaatgtaga gagtcttatg actgaactag aaatagaaaa atcactcaaa 420
catcatgaag atattgtaga tgaaattgag tgcattgaga agactcttct gaaacgtcgc 480
tcanagctca gggaagctga ccgactcctg gcagaggctg agagtgaact ttcatgcact 540
aaagaaaaga caaaaaatgc tgttgaaaag ttcactgatg ccaagagaag tttattgcaa 600
actgagtcag atgctgaggg aattagaaag gagagctcan gaaactgctg ttaanctcgt 660
caaanctgat cagcagctaa gatcgctcca agctgatgca aaaggatttg gancancaca 720
angatcaagc aagaagaaat cttgaaaaga aattaacnaa aatttntnca gcaaaagact 780
cagacttcaa a 791

<210> 227
<211> 687
<212> DNA
<213> Homo Sapiens

<400> 227
gattgttatc ttttattttc atatgaaaaa tagattttaa gcaaaattca aaaataactc 60
gacactataa aaanagaggg ccttaagtac attcttttttg ttaataagat ttaccagttt 120
gtaggttcaa atatgcagtt aaaatcactg ttttttttta aacatgttac gaagattaaa 180
aaaaaaaagg ctcagccaca tgttggttta aattcccata tgcaactatt cccatatgta 240
ctatgtacaa gtgatttata aaaacattgg cattaatggt acaggcaaag taaactacag 300
tggagtttca naatctcagt tcactgcatc ttgattaaaa aaaccatgtg acattccaat 360
tatgaagtca gtgaggtagt ggaggtgttt tccttgaata tatttacaca agacagtatt 420
cctcatctgg ctgaggcatt cttttccgga ttttgtccaa gttganagtc ctctgtgagg 480
gaagactcca agctgagaca gactgggtga tgacgctgaa tctgcaaagg tgcctggtga 540
ccaattcccc ctaanagcat cctacttgtc tccncaaact gtgntaaagt gccctctgtc 600
ctgccgcttt cctttaatna aaacttctgg cttngcttgg ggcanacagt gtcgganttg 660
gggccttgag tcnggcttcc cggggaa 687

<210> 228
<211> 810
<212> DNA
<213> Homo Sapiens

<400> 228
gtctgggcag cgccaggcga tggccctgct gctggtgctc ctcgcctctt ggggcctggg 60
gcagtgaggg ggccggcggg cgtgggccga gtggccgcgg gcgccatgga gggggtgctg 120
tacaantgga ccaactatct gagcggttgg cagcctcgat ggttccttct ctgtggggga 180
atattgtcct attatgattc tcctgaagat gcctggaaag gttgcaaagg gagcatacaa 240
atggcagtct gtgaaattca agttcattct gtagataata cacgcatgga cctgataatc 300
cctggggaac agtatttcta cctgaaggcc agaagtgtgg ctgaaagaca gcggtggctg 360
gtggccctgg gatcagccaa ggcttgcctg actgacagta ggacccagaa ggagaaagag 420
tttgctgaaa acactgaaaa cttgaaaacc aaaatgtcan aactaagact ctactgtgac 480
ctccttgttc ancaagtaga ttaaaacata agaagtgacc acaactggtg tgtccaattc 540

tgaggtaaag gagtcttcca ctctggttgt ttcgtangag ggaattgatg tgggaacttt 600
gctgaaatca anctgntata ctttttctga aagaccttgg taagaattca tgcanatngc 660
aaattgcagc cttnaanctc ctgaagcctn cttctaaccg gcactccaac canggaatna 720
anctnaagct gggccaatgg ctccaaagtt ccaacnaaag gttaaaanat cccagctcaa 780
atttgggcng caaacaaagg gcaatccaac 810

<210> 229
<211> 552
<212> DNA
<213> Homo Sapiens

<400> 229
gtaaatttgt ttgagttcat tgtagattct ggatattagc ccttttgtca gatgagtaga 60
ttgcaaaaat tttctcccat tctgtaggtt gcctgttcac tctgatggta gtttcccttg 120
ctgtgcggaa gctctttagt ttaattagat cccatttgtc aatttcggct tttgttgcca 180
ttgctttcgg tgttttagac atgaagtcct tgcccatgcc tatgtcctga atggttttcc 240
taggttttct tctagggttt ttatggtttt aggtctaaca tttaagtctc gaatccatct 300
tgaattaatt tttgtataag gtgtaaggaa gggatccact ttcagctttc tacgtatggc 360
tagccagttt tcccancacc atttattaaa tagggaatcc tttccccant tcctgttttt 420
gtcangtttg tcaaagatca natggctgta natatgcanc attatttccg agggctctgt 480
tcngttccat tggtctacat ttccgttttg gttccngtac catgctgttt tttgttacng 540
gtanaccttg gt 552

<210> 230
<211> 842
<212> DNA
<213> Homo Sapiens

<400> 230
ctcatcagtt agaagaaaaa gaaaatcaaa ttaagagcat gaaggctgat attgaaagtc 60
ttgtaacaga aaaagaagcc ttacagaagg aaggaggcaa tcagcaacag gctgcttctg 120
aaaaggagtc ttgtataaca cagttgaaga aagagttatc tgaaaacatc aatgctgtca 180
cattgatgaa agaagagctt aaagaaaaaa aagttgagat tagcagtctt agtaaacaac 240
taactgattt gaatgttcag cttcaaaata gcatcagcct atccgaaaaa gaagcagcca 300
tttcatcact aagaaagcag tatgatgaag aaaaatgtga attgctggat caggtgcaag 360
atttatcttt taaagttgac actctgagta aagagaaaat ttctgctctt gagcaggtag 420
atgactggtc caataaattc tcagaatgga agaagaaagc acagtcaaga tttacacagc 480
atcaaaacac tgttaaagaa ttgcagatcc agcttgagtt aaaatcaaag gaagcttatg 540
aaaaggatga gcagataaat ttattgaagg aagagcttga tcagcaaaat aaaagatttg 600
attgtttaaa gggtgaaatg gaagacgaca agagcaagat gggagaaaaa ggagtctaat 660
ttagaaacag agttaaagtc tcaaacagca agaattatgg gattagagga ccatattanc 720
caagaaaact atttggaaat tagagtcctt aaatngaaag ttccttaaaa aattacaatc 780
aacaaaaagg atattggacc acaaagnaat tgggtcaaaa aaccttcaac aantttcaag 840
ga 842

<210> 231
<211> 781
<212> DNA
<213> Homo Sapiens

<400> 231
atatagtaaa taaactttat ttatctgttt ctcagagatg acactgccaa caatcacaga 60
tttgcataca atacagttat gtattggcta ttcacaattt acagtagtgt tttttcctct 120
gaaaaatata agtacaaaag ctaagtaaac aatgaggtac tgccatttgg gatttttac 180
atgtcttagc ttaaagaact ggtctttagc aaatattcaa cagatcaacc tgaataaaat 240

agtcaattaa atgctctaat ttatcagaaa aaatccacta agtttcacct caaaatgtat 300
tgcacaagtc tttttaaaaa atcaccctaa aaataaatag gaaaggtaag ccgttcttta 360
aaaagaatgg atgaaaggaa tattatgtaa gcccataaag caggttaagt tatcaaaata 420
tcttttaaac aacataaaac tcttcccaag agaaaactga agaaaaaact atcaccattt 480
ctccactgat aaaatctatt ttaaaggcag tctgcaactt atctgtgggc cagatttttc 540
ttgggtcttt tggctacatg aggggccctg aatgacaact tcattctcaa agagtagcaa 600
agtgtggaca agttttccaa gcagcangtc acccaatgtc actcttcctc aagatgaagg 660
atcggagcca tgacacatgt ttaactaagc acagaccgga tgggtttacc cagaagatac 720
cactggcaan ggtgaagtaa acatcaggcc gaggcaacct tccccntttc aaaaantttt 780
c 781

<210> 232
<211> 767
<212> DNA
<213> Homo Sapiens

<400> 232
gttatatagt aaataaactt tatttatctg tttctcagag atgacactgc caacaatcac 60
agatttgcat acaatacagt tatgtattgg ctattcacaa tttacagtag tgtttttcc 120
tctgaaaaat ataagtacaa aagctaagta aacaatgagg tactgccatt tgggattttt 180
tacatgtctt agcttaaaga actggtcttt agcaaatatt caacagatca acctgaataa 240
aatagtcaat taaatgctct aatttatcag aaaaaatcca ctaagtttca cctcaaaatg 300
tattgcacaa gtctttttaa aaaatcaccc taaaaataaa taggaaaggt aagccgttct 360
ttaaaaagaa tggatgaaag gaatattatg taagcccata aagcaggtta agttatcaaa 420
atatctttta aacaacataa aactcttccc aagagaaaac tgaagaaaaa actatcacca 480
tttctccact gataaaatct attttanagg cagtctgcaa cttatctgtg ggccagattt 540
ttcttggtct tttggctaca tgaggggccc tgaatgaaaa cttcattctc aaaggagtag 600
caagtgtggg acagttttcc aagcagcagt cacccaatgt cactcttctt caagatgaaa 660
gatcggagnc atgacacatg ttaacctaag nacangactg gagggtttac ncangaagat 720
acactgcgaa ggtgaaagtt aaacatcaag ccgaggaacc tcccctt 767

<210> 233
<211> 879
<212> DNA
<213> Homo Sapiens

<400> 233
gggagtttaa tacacagctg gcacaaaagg aacaagagct ggaaatgacc ataaaagaaa 60
ctatcaataa ggcccaggag gtggaggctg aacttttaga aagccatcaa gaagagacaa 120
atcagttact taaaaaaatt gctgagaaag atgatgatct aaaacgaaca gccaaaagat 180
atgaagaaat ccttgatgct cgtgaagaag aaatgactgc aaaagtaagg gacctgcaga 240
ctcaacttga ggagctgcag aagaaatacc agcaaaagct agagcaggag gagaaccctg 300
gcaatgataa tgtaacaatt atggagctac agacacagct agcacagaag acgactttaa 360
tcagtgattc gaaattgaaa gagcaagagt tcagagaaca gattcacaat ttagaagacc 420
gtttgaagaa atatgaaaag aatgtatatg caacaactgt ggggacacct tacaaaggtg 480
gcaatttgta ccatacggat gtctcactct ttggagaacc taccgaattt gagtatttgc 540
gaaaagtgct ttttgagtat atgatgggtc gtgagactaa gaccatggca aaagttataa 600
ccaccgtact gaagttccct gatgatcaga ctcagaaaat tttgggaaaa gagaagatct 660
cggctgatgt ttacttcacc tcgcagtggt atcctcngag taaaccatca gtcgtgccta 720
agtttacatg tgtcatgggt ccgattcttc atcctttgaa gaaagagtgg acattggggt 780
naccggctgc cttgggaaaa ctgtccanac nttgcnaacn ccttggggaa atggaagntt 840
ttccanttca agggcccccc caangnttgc ccaaacagg 879

<210> 234
<211> 780

<212> DNA
<213> Homo Sapiens

<400> 234
aaactttatt tatctgtttc tcagagatga cactgccaac aatcacagat ttgcatacaa 60
tacagttatg tattggnnng gcacaattta cagtagtgtt ttttcctctg aaaaatataa 120
gtacaaaagc taagtaaaca atgaggtact gccatttggg atttttttaca tgtcttagct 180
taaagaactg gtctttagca aatattcaac agatcaacct gaataaaata gtcaattaaa 240
tgctctaatt tatcagaaaa aatccactaa gtttcacctc aaaatgtatt gcacaagtct 300
ttttaaaaaa tcaccctaaa aataaatagg aaaggtaagc cgttctttaa aaagaatgga 360
tgaaaggaat attatgtaag cccataaagc aggttaagtt atcaaaatat cttttaaaca 420
acataaaact cttcccaaga gaaaactgaa gaaaaaacta tcaccatttc tccactgata 480
aaatctattt taaaggcagt ctgcaactta tctgtgggcc agatttttct tggtcttttg 540
gctacatgag gggccctgaa tgaaaacttc attctcaaag agtagcaagt gtggacaagt 600
tttccaagca gcagtcancc aatgtcactc ttcttcaaga tgaaagatcg gagccatgac 660
acatgttaac taagcacaga cntgatggtt tactncagaa gattaccact gcnaaggtga 720
aagttaaaca tcaagncgag catncntctc tttccaaaaa ttttccggng tccggattca 780

<210> 235
<211> 780
<212> DNA
<213> Homo Sapiens

<400> 235
attctgaggg tatattaagt cagagtcagg ataaatcact tcggagaata gcagaattaa 60
gagaggagct ccaaatggac cagcaggcaa agaaacatct gcaagaggag tttgatgcat 120
ctttagagga gaaagatcag tatatcagtg ttctccaaac tcaggtttct ctactgaaac 180
aacgattacg aaatggcccg atgaatgttg atgtactgaa accacttcct cagctggaac 240
cacaggctga agtcttcact aaagaagaga atccagaaag tgatggagag ccagtagtgg 300
aagatggaac ttctgtaaaa acactggaaa cactccagca aagagtgaag cgtcaagaga 360
acctacttaa gcgttgtaag gaaacaattc agtcacataa ggaacaatgt acactattaa 420
ctagtgaaaa agaagctctg caagaacaac tggatgaaag acttcaagaa ctagaaaaga 480
taaaggacct tcatatggcc gagaagacta aacttatcac tcagttgcgt gatgcaaaga 540
acttaattga acagcttgaa caaggataag ggaatggtaa tcgcagagac aaaacgtcag 600
atgcatgaaa ccctggaaat gaaagaagaa gaaattgctc aactccgtag tcgcatcaaa 660
cagatgacta cccaagggag aggaattacg ggaacaagan agaaaagtcc gaaagaactg 720
cntttgaggg aacttgaaaa agccttgagt acagnccaaa aanacagngg aagccaccgg 780

<210> 236
<211> 711
<212> DNA
<213> Homo Sapiens

<400> 236
cttggttttt aaatttggtt tcatattcct cattcaaaat atgaatactg tcctccttgg 60
ctgacaattt ctgtgtgagt atctcaattt ctttcttctg tccttctctc atttgtaaaa 120
tcatattttc cttttccacc aagatttgct ttgtctgttc ctgttctttg ttaccatctt 180
caagtttgga ctcatagact tgggttaaag attttacttt ttgctccatt tcactatttt 240
gtttttcaag ttgctgcatt aagtcctgca cctggatttt gtgagcatct aactcagtac 300
aaacatcttt cttttgtgct tcaacttcag caacctgttt ggtaagaaga attctttctg 360
tttccaaatc caacaacttc tgctgcaatt gggccaactg ttcctcatat gcttttgtct 420
gctcatgtgt ggcactctgg taagactgaa aaacgtccag cttagcagat gcctgctgga 480
gttccccttc agacctttta atatctgcct ccaaattttc tacatgagcc tgatgctctt 540
tcaaatgctt gtccctttcc ttcaagagaa gctcaagttg nttaanttga tcttttaaag 600
ccttctcaan tcctccggga tanaaaacnt cgtgttcttt naatgagaac ggtcaacntg 660

ccggctgggt gataantttt ccgttcancc ancettgggg ctccaaattc c 711

<210> 237
<211> 658
<212> DNA
<213> Homo Sapiens

<400> 237
atagtaaata aactttattt atctgtttct cagagatgac actgccaaca atcacagatt 60
tgcatacaat acagttatgt attggctatt cacaatttac agtagtgttt tttcctctga 120
aaaatataag tacaaaagct aagtaaacaa tgaggtactg ccatttggga ttttttacat 180
gtcttagctt aaagaactgg tctttagcaa atattcaaca gatcaacctg aataaaatag 240
tcaattaaat gctctaattt atcagaaaaa atccactaag tttcacctca aaatgtattg 300
cacaagtctt tttaaaaaat caccctaaan ataaatagga aaggtaagcc gttctttaaa 360
aagaatggat gaaaggaata ttatgtaagc ccataagagc aggttaagtt atcaaaatat 420
cttttaaaca ncataaaact cttcccanga gaaaactgaa gaaaaaacta tcaccatttc 480
tccactgata aaatctattt taaaggcagt ctgcanctta tctgtgggcc aagatttttc 540
ttggnctttt ggctacatga gggggccctg gaatgaaaaa cttcattccc aanggagttn 600
gcnaggtgtg ggacaggttt tccaaggcaa gcaagtnagc caaatngtca gctcttcc 658

<210> 238
<211> 678
<212> DNA
<213> Homo Sapiens

<400> 238
gttatatagt aaataaactt tatttatctg tttctcagag atgacactgc caacaatcac 60
agatttgcat acaatacagt tatgtattgg ctattcacaa tttacagtag tgtttttttcc 120
tctgaaaaat ataagtacaa aagctaagta aacaatgagg tactgccatt tgggattttt 180
tacatgtctt agcttaaaga actggtcttt agcaaatatt caacagatca acctgaataa 240
aatagtcaat taaatgctct aatttatcag aaaaaatcca ctaagtttca cctcaaaatg 300
tattgcacaa gtctttttaa aaaatcaccc taaaaataaa taggaaaggt aanccgttct 360
ttaaaaagaa tggatgaaag gaatattatg taagcccata aagcaggtta agttatcaaa 420
atatctttta aacaacataa gaactcttcc caaggagaaa actgaannaa aaaactatca 480
ncatttcnnc actgataaaa tctantttaa agggnagtcn gcaacttanc tgtgggccag 540
atttttccgt ggggcttttg ggctacantn agggggccct gaatgaaaaa nttcaattcc 600
ncaaatgnng tagcaaattg tgggncangt ttttccaaag cagncaantt cancccnana 660
tgtcactcct tccttcaa 678

<210> 239
<211> 1402
<212> DNA
<213> Homo Sapiens

<400> 239
gggagtttaa tacacagctg gcacaaaagg aacaagagct ggaaatgacc ataaaagaaa 60
ctatcaataa ggcccaggag gtggaggctg aacttttaga aagccatcaa gaagagacaa 120
atcagttact taaaaaaatt gctgagaaag atgatgatct aaaacgaaca gccaaaagat 180
atgaagaaat ccttgatgct cgtgaagaag aaatgactgc aaaagtaagg gacctgcaga 240
ctcaacttga ggagctgcag aagaaatacc agcaaaagct agagcaggag gagaaccctg 300
gcaatgataa tgtaacaatt atggagctac agacacagct agcacagaag acgactttaa 360
tcagtgattc gaaattgaaa gagcaagagt tcagagaaca gattcacaat ttagaagacc 420
gtttgaagaa atatgaaaag aatgtatatg caacaactgt ggggacacct tacaaaggtg 480
gcaatttgta ccatacggat gtctcactct ttggagaacc taccgaattt gagtatttgc 540
gaaaagtgct ttttgagtat atgatgggtc gtgagactaa gaccatggca aaagttataa 600

```
ccaccgtact gaagttccct gatgatcaga ctcagaaaat tttggaaaga gaagatgctc     660
ggctgatgtt tacttcacct cgcagtggta tcttctgagt aaaccatcag tctgtgctta     720
gttaacatgt gtcatggctc cgatcttcat cttgaagaag agtgacattg ggtgactgct     780
gcttggaaaa ctgtccacac ttgctactct ttgagaatga agttttcatt cagggcccct     840
catgtagcca aaagaccaag aaaaatctgg cccacagata agttgcagac tgcctttaaa     900
atagatttta tcagtggaga aatggtgata gtttttttctt cagttttctc ttgggaagag     960
ttttatgttg tttaaaagat attttgataa cttaacctgc tttatgggct tacataatat    1020
tcctttcatc cattcttttt aaagaacggc ttacctttcc tatttatttt tagggtgatt    1080
ttttaaaaag acttgtgcaa tacattttga ggtgaaactt agtggatttt ttctgataaa    1140
ttagagcatt taattgacta ttttattcag gttgatctgt tgaatatttg ctaaagacca    1200
gttctttaag ctaagacatg taaaaaatcc caaatggcag tacctcattg tttacttagc    1260
ttttgtactt atatttttca gaggaaaaaa cactactgta aattgtgaat agccaataca    1320
taactgtatt gtatgcaaat ctgtgattgt tggcagtgtc atctctgaga aacagataaa    1380
taaagtttat ttactatata ac                                            1402
```

<210> 240
<211> 760
<212> DNA
<213> Homo Sapiens

<400> 240

```
gtgcagtttc tcttatattc ctcacatatg tgctttcatt catctttcgc aagtggagaa      60
aaaataatgg cttttggtct tttggctttt ttattatctt aatatgtgta tccacaatta     120
tggtatcaac tcaatatgaa aaactcaact taattttgtg catgattttc ataccttcct     180
tcactttgct ggggtatgtc atgttattga tccagctcga ctttatgaga aacttggaca     240
gtctggacaa tagaataaat gaagtcaata aaaccattct tttaacaacc ttaataccat     300
accttcagag tgttattttc ctttttgtca taaggtgtct ggaaatgaag tatggaaatg     360
aaataatgaa taaagaccca gttttcagaa tctctccacg gagtagagaa actcatccca     420
atccggaaga gcccgaagaa gaagatgaag atgttcaagc tgaaagagtc caagcagcaa     480
atgcactcac tgctccaaac ttggaggagg aaccagtcat aactgcaagc tgtttacaca     540
aggaatatta tgagacaaag aaaagttgct tttcaacaag aaagaagaaa atagccatca     600
gaaatgtttc cntttgtgtt aaaaaaggtg aaagttttgg ggattaccta ggacacaatg     660
ggagctggta aaagtacttc cattaaaatg ataacntggg tgcacaaagc caaactgcan     720
ggagtggtgg gtgttacaaa ggnagcagan gcatcnggta                          760
```

<210> 241
<211> 745
<212> DNA
<213> Homo Sapiens

<400> 241

```
aaaagtccan caaagtttta tttctaagaa ataaacttgc atataacccg aacgtaacaa      60
cncnggtatt acatcaatac agctataaca ttaatgcagc aattatataa cacaaaagtg     120
ctataatgac atgggaaatg ttcatgaact gtgaggtgaa aagatacaga aaatgactat     180
gcctacngat actacctttg aaaaaggatc cataaaaaat acattgaata taagttggct     240
aaagaaaata ttaactgcgg tactttctta cagattangg ctancttctt ccatataact     300
tcaatatgta ctaaaattca catgcattta ttttataatc agaatgtcat tataattaaa     360
tgttangctg tgccatttca tcagtttatc anaccttctt atagtcaatg tcacattaaa     420
ttagaatccg agtaaataan gtttaaaaat anctgataca tttgaagttc aggctaaaaa     480
cctcatattt ttatttgtaa aatgttctca ntgttagctt tattgataat aaccgataac     540
caacctaata ttgtangatt tttaaattat ttttaagcac aaantagacc catgttgggg     600
atgaataaca tgtcngattt tgtnaatttt ggtcnacnac ttttcccaaa aatttccttg     660
tttccttcan ccnaaatttt taaaantgaa aactgtatca attatggaan ggtttattaa     720
aangtttncc tttggtaacc ngaag                                         745
```

<210> 242
<211> 818
<212> DNA
<213> Homo Sapiens

<400> 242
gcaacgccgg ggcgcccgag gtctggaagg cgcagaaatg gagcaagagc cacaaaatgg 60
agaacctgct gaaattaaga tcatcagaga agcatataag aaggcctttt tatttgttaa 120
caaaggtctg aatacagatg aattaggtca gaaggaagaa gcaaagaact actataagca 180
aggaatagga cacctgctca gagggatcag catttcatca aaagagtctg aacacacagg 240
tcctgggtgg gaatctgcta gacagatgca acagaaaatg aaagaaactc tacagaatgt 300
acgcaccagg ctggaaattc tagagaaggg tcttgccact tctctgcaga atgatcttca 360
ggaggtgccc aagttatatc cagaatttcc acctaaagac atgtgtgaaa aattaccaga 420
gcctcagtct tttagttcag ctcctcagca tgctgaagta aatggaaaca cctcaactcc 480
aagtgcaggg gcagttgctg cacctgcttc tctgtcttta ccatcacaaa gttgtccagc 540
agaagctcct cctgcttata ctcctcaagc tgctgaaggt cactacactg tatcctatgg 600
aacagattct ggggagtttt catcagttgg agaggagttt tatagggaat cattctcagc 660
caacggcctc ttnagaacct taagggctgg gattcangat gaaattgatt ttgataccaa 720
atgggagtac annttttttt tgtaaatcct gcaangggga ngttatgcan cttcgtancc 780
ccggggtacc ttcnaattgt gaagggtttt gggntaaa 818

<210> 243
<211> 799
<212> DNA
<213> Homo Sapiens

<400> 243
aatttcttga agtacttttt taatccaatt aagctgataa taatcacttc gaattttaat 60
acaatacaat catgttccca aatttccnag gctcataaca atacagtctc aatacaaaag 120
acgtaataat ctatttttat tcatttaaa tcaaagaaac cattccattt cctaacaaac 180
aggtaagtta caaaagtagt ccatttact tttcatcagt ctttccctgt tttgaacaag 240
tctttttgag aattcttagt tttagttttt gtttagctta cacactgaaa attttgagaa 300
gcatctaaaa aaatccacaa ttagtgcaaa aagaggggac aatactttaa gtcattcctt 360
ctataaaaag aattaaggtt actaaatgcc aatttttaag caaatatata gtttcctatt 420
tgccttctga aagacagcag atataaaaat agttcaatat taggtttaac aaggtttgaa 480
caacacatgt actatcagct ttattttacc tgcaaaaata ttttagctac acttggaaaa 540
aaaataaact tgagaatata acttcacatt tctaaggcca gatgcaagaa tacttaatct 600
tttcctttta aatagaagac atgccataaa atttatgaaa agttaatttg taggaatggn 660
atacatttaa aaaatacngg ttaaaccngg tgagggaatt ccacatttgg cctatttaac 720
aaaaatttta aaccaatttt caaaaggggc tttggggtaa aaagtngatt cccaagcaac 780
ntcaancant ttaaccttc 799

<210> 244
<211> 726
<212> DNA
<213> Homo Sapiens

<400> 244
gtgagttgag cgctgctgct ccgcggtgga gtcaccgcac cgctcccggg atcatggtgt 60
tctacttcac cagcagcagc gttaattcat ctgcctacac tatttacatg ggaaaagata 120
aatatgaaaa tgaagatctg atcaagcatg gctggcctga agatatctgg tttcatgtgg 180
acaaactctc ttcggctcat gtataccttc gattacataa gggagagaat atagaagaca 240
tcccaaagga agtgctgatg gactgtgccc accttgtgaa ggccaatagc attcaaggct 300
gcaagatgaa caacgttaat gtggtatata cgccgtggtc taacctgaag aaaacagctg 360
acatggatgt ggggcagata ggctttcaca ggcagaagga tgtaaaaatt gtgacagtgg 420

agaagaaagt aaatgagatc ctgaaccgat tagaaaagac caaagtcgag cggttcccag 480
acctancagc agagaaagaa tgcagagatc gtgaagagag gaatgagaaa aaagcccaaa 540
ttcaggaaat gaaaaagaga gaaanagaag aaatgaagaa gaanagggaa atggatgaac 600
ttangagcta ttcatcacta atgaaagttt gaaaatatgt cttcanatca ggatggcaat 660
ggattcagat gaattcatgt taaaaggaga aaaggngaaa aaggaccttt gaaaaatttg 720
aatgtt 726

<210> 245
<211> 592
<212> DNA
<213> Homo Sapiens

<400> 245
ccagattaaa aaaatggtat tttattataa cttttaaaat tgcggaacat cagactgaat 60
atcatcagac acatacacaa aaccactcat ctctaaagtc attttctata ccctctcaaa 120
atttggccag tgagttttgc ctcagggaat tttccagttc aaccccatac accaacatgg 180
aataaatgga aacactagcc ttttggtttt gcccanagtt ccaaagtgct attacaggtg 240
gaatatctgc tgcaggaagt cattcttgct gctgtgggtg tgagtaaaat gcttagttcc 300
ttctaaaatc ataattgcaa tatggacttc tgcttcacgc tgcatcctaa ggcacaaatc 360
aggtaaccta catctcccaa atgatcaaca ggagcactcc atcctatttt accctcaatg 420
cnganaaatt acncctgggc ccanaagttg tcacataggt ggcttgggtt acttggggct 480
caggcaacaa ctgccacagg ccccagcttg atgaanacca tcnatttctt taaaatatgt 540
tggnnactaa gatggaggcc tccggcncan agggaancan nggacataaa ac 592

<210> 246
<211> 821
<212> DNA
<213> Homo Sapiens

<400> 246
aggatgaaga gctggagagc gccgaggacg acgagcgcag ctgtcggggc cgcgagtcgg 60
acgaagacac tgaggatgct agtgaaactg acctggcaaa gcatgatgaa gaagactatg 120
tagaaatgaa ggaacagatg tatcaggaca aactggcttc tctcaagagg cagttgcaac 180
aactgcaaga aggtacatta caggaatatc agaagagaat gaaaaaacta gatcagcagt 240
acaaagagag gatacggaat gcagaactct tcctccagct ggaaactgaa caagtggaac 300
gaaattacat taaagaaaag aaggcagcag tgaaagaatt tgaagacaag aaggttgagc 360
tgaaagagaa cctgattgct gagctagaag aaaagaagaa aatgattgaa aatgaaaagc 420
tgacaatgga actgactgga gattctatgg aggtgaaacc tatcatgacc agaaagttgc 480
ggaggcgacc aaatgatccc gtccccatcc cagacaagag gaggaaacct gctccagccc 540
agctaaacta tttgttaaca ggatgaacag atcatggagg atctgagaac attaaataag 600
cttaagtcac ccaagagacc agcatctcca tcctctcctg agcacttgcc tgcaacaccc 660
gccggaatct ccaagcccca gaggttcnaa agccccggat anaagaatgg caaacctgtt 720
actatgacaa aaagatggtt accacaagag ccaaggccat cctatcctgg angtcaaagg 780
gacaaaccan gaaactgaag cctgcctnat taagtttccg t 821

<210> 247
<211> 639
<212> DNA
<213> Homo Sapiens

<400> 247
gttacacaaa gcatttattt ctctgagaag gccgagagcc acgagaattc atcatctcct 60
gctaggacct ctgccccaag cttctgggca aatagtgaat tggacgcgac agggaaagta 120
gctacgtgat ccactaatca gattcaaaac atgaaaatgc actggagagt gtatcccttc 180
ctgctcttct ccatggtaga gagacttaaa gataatcaat aaaaatagct gtcccttcaa 240

actcagagga ggttttcaaa aacaagtata agcaaaaaat aaagaaataa aaggaaagta 300
aatcaaaccc cccaatacgc ctgaaagtaa aacagtctca tggtgactga tgtctggaan 360
aagttgaggc agaaaagact gacaaagttg gaangcatcc cggccacaaa agtgcccnaa 420
aagaattcan tgcagtgctc tccatttcca aggctgagta actattccca gntaagttaa 480
catttttcna nttaaggana nancgaanac anntncatnt ctanatccca ctccagaaat 540
anggtcaatg agaangangc actgtannna aagtcaagna gctggancnc ccgggcggnt 600
tnacccaaga gcccggcgct nnaagcctgg gcccaagct 639

<210> 248
<211> 846
<212> DNA
<213> Homo Sapiens

<400> 248
aacaggatgt caaaaattaa actgcgcttt ccatcacaat agaggacgat atgttgatgg 60
ccttttccta cctccgagca aaactgtgtt gcccactgtg cctgagtcac cagaagagga 120
agtgaaggct agccaacttt cagttcagca gaacaaattg tctgtccagt ccaatccttc 180
ccctcagctg cggagcgtta tgaaagtaga aagttccgaa aatgttccta gccccacgca 240
tccaccagtt gtaattaatg ctgcagatga tgatgaagat gatgatgatc agttttctga 300
ggaaggtgat gaaaccaaaa cacctaccct gcaaccaact cctgaagttc acaatggatt 360
acgagtgact tctgtccgga aacctgcagt caatataaag caaggtgaat gtttgaattt 420
tggaataaaa actcttgagg aaattaagtc aaagaaaatg aaggaaaaat ctaagaagca 480
aggtgagggt tcttcaggag tttccagtct tttactccac cctgagcccg ttccaggtcc 540
tgaaaaagaa aatgtcagga ctgtggtgag gacagtaact ctctccacca aacaaggaga 600
agaacccttg gttagattga gtcttactga gagactgggg aaacgaaaat tttcagcagg 660
cggtgacagt gatcctccat taaagcgtag cctggcacan aggctaaggg aagaaagttg 720
aagctccaga aactaacant gacaaaacac caangaaagc tcaagtttcc aagtcccccc 780
aaaggggcga attaggcatg tcagccngga ttcaagataa tnagggatgc aacaagatta 840
aaggtt 846

<210> 249
<211> 763
<212> DNA
<213> Homo Sapiens

<400> 249
gactttccta catcagtttt atttaaaaca caaacaagta tttctctttc tgtaagggca 60
aatggttcaa ataatgcgga acacgaaaca ttgactaata caagtgcttt aaatatgaaa 120
caaaattatt ttttaaaaaa gcaaaagaat aaagaatata tacaaaaggg acctggaatc 180
tgtaagctga ttccaaaaat gaaataagta gaaaatccat ggtgaaacct gaacattcta 240
cctctgcttt ggagaagggc tatcatacaa cattcagtca gctgaagatg gattggtaga 300
ggtgtgtcta tacataaact tcagtcattt ttgcttgtgc agaatcatcc caatcttccc 360
aagactgaat gggcagtcct gtggctttct tccttttcca tattcccaac aaggctacgt 420
gaagttcaac tcttgatgag ccgcttacaa cagcagttcc ttaggagcca acatgacagg 480
tgggtcagat ttcccctatga gaaacaaaac tggccaccta cagcaaaata tcaaaatggg 540
taagtccttc cttcctcttc ctcctgatta tatacaacat atctcctttc aagactatta 600
tttccatcat gccttattcc ttcacaaatc taaaccttga ngtgatatga angaaaccaa 660
catcaagaaa agaaaactca attcagaaat gaanaaaacg ggcaggtata caatacaccc 720
cagagcatct caatatcccc tgggacagnt acaattcagt gtt 763

<210> 250
<211> 899
<212> DNA
<213> Homo Sapiens

<400> 250
attcaagtca agagatgtga gaccatgaga gagaagcaca tgcagaaaca gcaggagagg 60
gaaaaatcag tcttgacacc tcttcgggga gatgtagcct cttgcaatac ccaagtggca 120
gagaaaccag tgctcactgc tgtgccagga atcacacggc acctgaccaa gcggcttccc 180
acaaagtcat cccagaaggt ggaggtagaa acctcaggga ttggagactc attattgaat 240
gtgaaatgtg cagcacagac cttggaaaaa aggggtaaag ctaaacccaa agtgaacgtg 300
aagccatctg tggttaaagt tgtgtcatcc cccaaattgg ccccaaaacg taaggcagtg 360
gagatgcacg ctgctgtcat tgccgctgtg aagccactca gctccagcag tgtcctacag 420
gaacccccag ccaaaaaggc agctgtggct gttgtcccgc ttgtctctga ggacaaatca 480
gtcactgtgc ctgaagcaga aaatcctaga gacagtcttg tgctgcctcc aacccagtcc 540
tcttcagatt cctcaccccc ggaggtgtct ggcccttcct catcccaaat gagcatgaaa 600
actcgccgac tcagctctgc ctcaacaagg aaagccccca ctctctgtgg aggatgattt 660
tgagaaacta atatgggaga tttcaaggag gcaaaattgg naactganat tgacctggat 720
tctgggaaaa gatgaagatg acccttccgg cttngngcct atcaannaaa ngattgntan 780
cctgaaaggg tggtaattga nggacnccct naaaaaaaaa atccnccaaa aaaactnggg 840
ccttaanttc naccaaatgg taacaatttn acctgagaat gnttaatttc ctttaggcc 899

<210> 251
<211> 755
<212> DNA
<213> Homo Sapiens

<400> 251
cctacatcag ttttatttaa aacactaaca agtatttctc tttctgtaag ggcaaatggt 60
tcaaataatg cggaacacga aacattgana nagacaagtg ctttaaatat gaaacaaaat 120
tatttttaa aaaagcaaaa gaataaagaa tatatacaaa agggacctgg aatctgtaag 180
gtgattccaa aaacgaaata agtagaaaat ccatggtgaa acctgaacat tctacctctg 240
ctttggagaa gggctatcat acaacattca gtcagctgaa gatggattgg tagaggtgtg 300
tctatacata aacttcagtc atttttgctt gtgcagaatc atcccaatct tcccaagact 360
gaatgggcag tcctgtggct ttcttccttt tccatattcc caacaaggct acgtgaagtt 420
caactcttga tgagccgctt acaacagcag ttccttagga gccaacatga caggtgggtc 480
agatttccct atgagaaaca aaactggcca cctacagcaa aatatcaaaa tgggtaagtc 540
cttccttcct cttcctcctg attatataca acatatctcc tttcaaagac tattatttcc 600
atcatgctta ntccttcaca aatctaaacc ttgaggtgat atgaaggaaa ccaacatcan 660
gaaaagaaaa ctcaattcag aaatgaagaa aacgggcang tatacaattc ancccagag 720
caacccaata atccctgggc aaaagttcaa ttcaa 755

<210> 252
<211> 753
<212> DNA
<213> Homo Sapiens

<400> 252
cctacatcag ttttatttaa aacactaaca agtatttctc tttctgtaag ggcaaatggt 60
tcaaataatg cggaacacga aacattgact aatacaagtg ctttaaatat gaaacaaaat 120
tatttttaa aaaagcaaaa gaataaagaa tatatacaaa agggacctgg aatctgtaag 180
gtgattccaa aaacgaaata agtagaaaat ccatggtgaa acctgaacat tctacctctg 240
ctttggagaa gggctatcat acaacattca gtcagctgaa gatggattgg tagaggtgtg 300
tctatacata aacttcagtc atttttgctt gtgcagaatc atcccaatct tcccaagact 360
gaatgggcag tcctgtggct ttcttccttt tccatattcc caacaaggct acgtgaagtt 420
caactcttga tgagccgctt acaacagcag ttccttagga gccaacatga caggtgggtc 480
agatttccct atgagaaaca aaactggcca cctacagcaa aatatcaaaa tgggtaagtc 540
cttccttcct cttcctcctg gattatatac aacatatctc ctttcaagac tattatttcc 600
atcatgcnta atccttcaca aatctaaaac cttgagggtg atatgaaagg aaaccaacat 660
canagaaaag aaaactcaat tcaagaaaat taagaaaacc tggcaaggta tacaaataca 720

ccccaggag catcccaaat aatccctggg aaa 753

<210> 253
<211> 793
<212> DNA
<213> Homo Sapiens

<400> 253
gactttccta catcagtttt atttaaaaca ctaacaagta tttcnctttc ngtaagggca 60
aatggttcaa ataatgcgga acacgaaaca ttgactaata caagtgcttt aaatatgaaa 120
caaaattatt ttttaaaaaa gcaaaagaat aaagaatata tacaaaaggg acctggaatc 180
tgtaaggnga ttccaaaaac gaaataagta gaaaatccat ggtgaaacct gaanattcta 240
cctctgcttt gganaagggc tatcatacaa cattcagtca gctgaanatg gattggtaaa 300
ggtgtgtcta tacataaact tcagtcattt ttgcttgtgc anaatcatcc caatcttccc 360
aagactgaat gggcagtcct gtggctttct tccttttcca nattcccaac aaggctacgt 420
gaagttcaac tcttgatgag ccgcttacaa cagcagttcc ttaggagcca acatgacagg 480
tgggtcagat ttccctatga gaaacaaaac tggccaccta cagcaaaata tcaaaatggg 540
taagtccttc cttcctcttc cncctgatta tatacaanat atctcctttc aagactatta 600
tttccatcat gcttattcct tcacanatct aaaccttgan gtgatatgaa nggnaaccaa 660
catcangaaa agaaaactca attcagnaat gaangaaaac tgggaggtat ttaatanacc 720
cccangnnga atccaaatac cctggnaana gttcaattca antgtacngc naaagnccat 780
aantaantat tgg 793

<210> 254
<211> 625
<212> DNA
<213> Homo Sapiens

<400> 254
cctacatcag ttttatttaa aacactaaca agtatttctc tttctgtaag ggcaaatggt 60
tcaaataatg cggaacacga aacattgact aatacaagtg ctttaaatat gaaacaaaat 120
tatttttaa aaaagcaaaa gaataaagaa tatatacaaa agggacctgg aatctgtaag 180
gtgattccaa aaacgaaata agtagaaaat ccatggtgaa acctgaacat tctacctctg 240
ctttggagaa gggctatcat acaacattca gtcagctgaa gatggattgg tanaggtgtg 300
tctatacata aacttcagtc atttttgctt gtgcagaatc atcccaatct tcccaagact 360
gaatgggcag tcctgtggct ttcttccttt tccatattcc caacaaggct acgtgaagtt 420
caactcttga tgagccgctt acaacancaa gttccttang agccaacatg acaggtgggg 480
tcangatttc cctatgagaa acaanactgg ccacctacag caaaaatatn aaaatggggt 540
aagtccttcc ttcctcttcc tcctgaatta tatncaacat ntctcctttt caagacnatt 600
anttccatca gggcttaatc cttca 625

<210> 255
<211> 907
<212> DNA
<213> Homo Sapiens

<400> 255
gccaacagca gcggagaaac gtttctcttt cctctcagtt tgcgcacacc atggcggccc 60
ctgcccagca gactactcag cctggcggcg ggaagcgcaa aggcaaggct cagtatgtgc 120
tggccaagcg cgctcggcgc tgcgacgctg gcgggccccg tcagctagag cccgggctac 180
agggcatcct catcacctgc aatatgaacg agcgcaagtg cgtggaggag gcctacagcc 240
tcctcaacga atacggcgac gacatgtatg ggccagaaaa gtttacagac aaggatcagc 300
agccctctgg aagtgaggga gaggatgatg atgcggaggc tgccttgaag aaagaagttg 360
gtgacattaa ggcatctaca gagatgaggt taagaagatt ccagtcagtg gaaagtggag 420
caaataacgt tgtcttcatc aggacacttg ggatagagcc tgagaaattg gtgcatcata 480

ttctccagga tatgtacaaa accaagaaaa agaagactcg agttattttg cgaatgttac 540
ccatctcagg cacatgcaag gctttttag aagatatgaa aaaatatgca gaaacatttt 600
tggaaccctg gtttaaagct ccaaacaaag ggacatttca gattgtgtac aaaatctcga 660
nataacagtc atgtnaatag agaagaagtt atcaagagaa tttgcangga atagtgtgca 720
acctcaattc agnaaataaa gtgggtntca acaatccaca agtacacaat ngtaatanaa 780
atcatcaaan ctgtcngttc cctganngtt tgttaaagga ttacaaggtt ggtttannaa 840
aattcaatcn ccaagaaggt tggtnaanaa ncccctaang ggntccttca naggcnttaa 900
ctcaaag 907

<210> 256
<211> 794
<212> DNA
<213> Homo Sapiens

<400> 256
aataacgcaa aatgacttat ggagacaacc actgatgggg caccaggagt gtagatacca 60
gacctctggt tatcagatat gatgtcacaa aanagagata ttggcctttg ttctggcagg 120
ctcctagcaa tagaaaaagt tttctttgaa tttcatcatt tacaaatctt acaaatgcta 180
cagcatgaca aatattagtg aaacctgttg actcatcatc ctggatagag aagctgctac 240
ttttcagtta atgacacaaa acctttttg catcatatga catatcatca gtaaatcaac 300
ttattgagaa taaagtctct tcaactttgt actgcatctt gccccagcat tttaatgtta 360
ttagattctc accaaccatg catattttcc tttcctgaga taagttctgc tactaaataa 420
tttgcttctt aaaccttttg actaaaggtg atttctgaac aaaagcctta ctgtttttga 480
tagtccaaaa gccatttgaa aataatgaat atcctttctt gtcaagtggc tgtgatttat 540
tgttacaatt gctaagtttt gtaagttgca tgtcacagac aatgcacaat gggacaagan 600
aaccttggac ctgagtccac ataaataccc cttgagaagt tanctttcc ttaattaaga 660
caagaatttc ctttggtgtc cccttggttg cactaagtat acttgaaagt ntnctccagn 720
angactggaa gttcttcaat caaccaanct ttttcaagaa aatgtccngt agtttcaang 780
gcctaaaaat gggt 794

<210> 257
<211> 885
<212> DNA
<213> Homo Sapiens

<400> 257
gacgccaaca gcagcggaga aacgtttctc tttcctctca gtttgcgcac accatggcgg 60
cccctgccca gcagactact cagcctggcg gcgggaagcg caaaggcaag gctcagtatg 120
tgctggccaa gcgcgctcgg cgctgcgacg ctggcgggcc ccgtcagcta gagcccgggc 180
tacagggcat cctcatcacc tgcaatatga acgagcgcaa gtgcgtggag gaggcctaca 240
gcctcctcaa cgaatacggc gacgacatgt atgggccaga aaagtttaca gacaaggatc 300
agcagccctc tggaagtgag ggagaggatg atgatgcgga ggctgccttg aagaaagaag 360
ttggtgacat taaggcatct acagagatga ggttaagaag attccagtca gtggaaagtg 420
gagcaaataa cgttgtcttc atcaggacac ttgggataga gcctgagaaa ttggtgcatc 480
atattctcca ggatatgtac aaaaccaaga aaaagaagac tcgagttatt ttgcgaatgt 540
tacccatctc aggcacatgc aaggcttttt tagaagatat gaaaaaatat gcagaaacat 600
ttttggaacc ctgggtttaa agctccaaac aaagggacat ttcagattgt gtacaaatct 660
cgaaataaca gtcatgtgaa tngagaaaga agttatcaga gaaattggca aggaatagtt 720
gtgcaccctc aattcagaaa attaaaggtg ggntctcaac caatccacag ttcacagntg 780
gtagttagaa atcaatcaaa acctgtcngt ttgcccgaan ttgnttgtta aaagaattca 840
angttggttt tanaaanaat naaatcccca aagaaggtgg gtgaa 885

<210> 258
<211> 798
<212> DNA

<213> Homo Sapiens

<400> 258

aacatttttg cataaatggg tctttgatac aggtaaccag ttttgtaaca ttattcagaa 60
cttcactgta tcttcaagtt tttgatatca gnagcactgt ggagaaagca gtgtgctata 120
atgtcaacat caggatttct ttttttttt ttaataacgc aaaatgactt atggagacaa 180
ccactgatgg ggcaccagga gtgtagatac cagacctctg gttatcagat atgatgtcac 240
aacattatat attggccttt gttctggcag gctcctagca atagaaaaag ttttctttga 300
atttcatcat ttacaaatct tacaaatgct acagcatgac aaatattagt gaaacctgtt 360
gactcatcat cctggataga gaagctgcta cttttcagtt aatgacacaa aacctttttt 420
gcatcatatg acatatcatc aagtaaatca acttattgag aataaagtct cttcaacttt 480
gtactgcatc ttgccccagc attttaatgt tattaagatt ctcaccaacc atgcatattt 540
tcctttcctg agataagttc tgctactaaa taatttgctt cttaaacctt ttgactaaag 600
gtgatttctg aacaaaagcc ttactgtttt tgataagtcc caaaaagcca tttgaaaaat 660
aatgaatatc ctttcntgtc aagtggctgt gaatttaatg ttacaattgc caagttttgt 720
aagttgcatn gtcacangac aatgcacaat ggggacaagg agaaccttgg gcctgagtcc 780
acaataanta ccccttga 798

<210> 259
<211> 831
<212> DNA
<213> Homo Sapiens

<400> 259

gccggcggta gacgaggacg ccaacagcag cggagaaacg tttctctttc ctctcagttt 60
gcgcacacca tggcggcccc tgcccagcag actactcagc ctggcggcgg gaagcgcaaa 120
ggcaaggctc agtatgtgct ggccaagcgc gctcggcgct gcgacgctgg cgggccccgt 180
cagctagagc ccgggctaca gggcatcctc atcacctgca atatgaacga gcgcaagtgc 240
gtggaggagg cctacagcct cctcaacgaa tacggcgacg acatgtatgg gccagaaaag 300
tttacagaca aggatcagca gccctctgga agtgagggag aggatgatga tgcggaggct 360
gccttgaaga aagaagttgg tgacattaag gcatctacag agatgaggtt aagaagattc 420
cagtcagtgg aaagtggagc aaataacgtt gtcttcatca ggacacttgg gatanagcct 480
gagaaattgg tgcatcatat tctccaggat atgtacaaaa ccaagaaaaa gaagactcga 540
gttattttgc gaatgttacc catctcaggc acatgcaang ctttttaga agatatgaaa 600
aaatatgcan aaacattttt ggaancctgg tttaaagctc caaacaaagg gacatttcag 660
attgtgttca aatctcgaaa ataacagtca tgttgaatag aagaagaagt tatcagagaa 720
nttggcaagg aataatgntg caacctcaat tcagaaaata aaagtggatt tcaccaattc 780
cacagtncac aantggtagt agaaatcatc aaaagctntc tgtttgcccg a 831

<210> 260
<211> 772
<212> DNA
<213> Homo Sapiens

<400> 260

aataacgcaa aatgacttat ggagacaacc actgatgggg caccaggagt gtagatacca 60
gacctctggt tatcagatat gatgtcacaa cattatatat tggcctttgt tctggcaggc 120
tcctagcaat agaaaaagtt ttctttgaat ttcatcattt acaaatctta caaatgctac 180
agcatgacaa atattagtga aacctgttga ctcatcatcc tggatagaga agctgctact 240
tttcagttaa tgacacaaaa cctttttttgc atcatatgac atatcatcag taaatcaact 300
tattgagaat aaagtctctt caactttgta ctgcatcttg ccccagcatt ttaatgttat 360
tagattctca ccaaccatgc atattttcct ttcctgagat aagttctgct actaaataat 420
ttgcttctta aacctttttga ctaaaggtga tttctgaaca aaagccttac tgtttttgat 480
agtccaaaag ccatttgaaa ataatgaata tcctttcttg tcaagtggcn gtgatttatt 540
gttacaattg ctagttttgt nagttgcatg tcacagacaa tgcacaatgg gacangagag 600

cctgggactg agtccacata atacccntga gaagtannct ttctttatta agacagaant 660
tctttgtgtc ccttgttgca caagtntact gaagtntcnc aagaaggact ggangtcntc 720
ataancaacc ttttagaaat gtccgtattc ctaaggccca aaaangggtc cc 772

<210> 261
<211> 753
<212> DNA
<213> Homo Sapiens

<400> 261
agacgaggac gccaacagca gcggagaaac gtttctcttt cctctcagtt tgcgcacacc 60
atggcggccc ctgcccagca gactactcag cctggcggcg ggaagcgcaa aggcaaggct 120
cagtatgtgc tggccaagcg cgctcggcgc tgcgacgctg gcgggccccg tcagctagag 180
cccgggctac agggcatcct catcacctgc aatatgaacg agcgcaagtg cgtggaggag 240
gcctacagcc tcctcaacga atacggcgac gacatgtatg ggccagaaaa gtttacagac 300
aaggatcagc agcccctctgg aagtgaggga gaggatgatg atgcggaggc tgccttgaag 360
aaagaagttg gtgacattaa ggcatctaca gagatgaggt taagaagatt ccagtcagtg 420
gaaagtggag caaataacgt tgtcttcatc aggacacttg ggatagagcc tgagaaattg 480
gtgcatcata ttctccagga tatgtacaaa accaagaaaa agaagactcg agttattttg 540
cgaatgttac ccatctcagg cacatgcaag gctttttag aaagatatga anaaatatgc 600
anaaaacatt tttggaaccc tgggtttaaa gctccaaaca aagggacatt tcagaattgt 660
ggtacaaatc tcgaaatanc agtcatgtta antagagaan naagtttttc agaagaattt 720
ggcaaggaat nagtnntgca accctcaatt tca 753

<210> 262
<211> 659
<212> DNA
<213> Homo Sapiens

<400> 262
aataacgcaa aatgacttat ggagacaacc actgatgggg caccaggagt gtagatacca 60
gacctctggt tatcagatat gatgtcacaa cattatatat tggcctttgt tctggcaggc 120
tcctagcaat agaaaaagtt ttctttgaat ttcatcattt acaaatctta caaatgctac 180
agcatgacaa atattagtga aacctgttga ctcatcatcc tggatagaga agctgctact 240
tttcagttaa tgacacaaaa cctttttttgc atcatatgac atatcatcag taaatcaact 300
tattgagaat aaagtctctt caactttgta ctgcatcttg ccccagcatt ttaatgttat 360
tagattctca ccangccatg catattttcc tttcctgaga taagttctgc tactaaagaa 420
tttgcttctt aaaccttttg actaaaggtg atttctgaac aaaagcctta ctgtttttga 480
nnagtccana agccatttga aaaataatga atatcctttc cttgtcaagt ggcngtgatt 540
tantgttaca atttgcnagg ttttgtaagt tgcatggtca cagnanaatg cacantnggg 600
acanngagan cntgggncng aagtccacat tatanccctt tgagnaangt agctttccc 659

<210> 263
<211> 673
<212> DNA
<213> Homo Sapiens

<400> 263
gagattttga tcacggtaac cgatcagaat gacaacaagc ccgaattcac ccaggaggtc 60
tttaaggggt ctgtcatgga aggtgctctt ccaggaacct ctgtgatgga ggtcacagcc 120
acagacgcgg acgatgatgt gaacacctac aatgccgcca tcgcttacac catcctcagc 180
caagatcctg agctccctga caaaaatatg ttcaccatta acaggaacac aggagtcatc 240
agtgtggtca ccactgggct ggaccgagag agtttcccta cgtataccct ggtggttcaa 300
gctgctgacc ttcaaggtga ggggttaagc acaacagcaa cagctgtgat cacagtcact 360
gacaccaacg ataatcctcc gatcttcaat cccaccacgt acaagggtca ggtgcctgaa 420

aacgaggcta acgtcgtaat caccacactg aaagtgactg atgctgatgc ccccaatacc 480
ccagcgttgg gaggctgtat acaccatatt gaatgatgat ggtgggacaa tttgtcgtca 540
ccacaaatcc agtgaacaac gatggcattt tgaaaaacag caaagttgaa gtcaagtgat 600
tttgctggtt cngaatcaat tgttgcctcn gttgggagaa aggtntccaa cacataccc 660
gggattngtt att 673

<210> 264
<211> 661
<212> DNA
<213> Homo Sapiens

<400> 264
ccatccaaga taactttatt ccattttgca ttatttgata actatttcct tcccctcccc 60
acctccaact gcatctccta ctctgaaatn cctcttgagc agccaagggt ggccagttct 120
gctcctcatt ttcctgaaga anaatctcag cctgaaagaa tatagagcta ggtgacatat 180
gggtggccaa ccgcttctcc tcaagttcca anagagtggg caattagtga aattccatca 240
gtcatgttaa aatatacttt caccaggtan acatccttct ttcaatgcta gaggacagtg 300
aaaaatgtag attaatgaga tctgtaactg tcttctctta actgtacacc cctcaggctg 360
aacgcgggag tgctgaacac atgccctcgg aagggaccct gaagacccaa gtgacctgca 420
ccataaaacc accccgaggg tcagccatgc tgccagcact caagaagcag cagggccacc 480
tgctggaaaa ctgggcacgg ctctgggtgc ctggccctgc ctgcctcctc cacgtccttg 540
gagccaggtc tacggcaggg aacatgatct tcttctccag cttctgtgga aggaacanga 600
aatttttcat gatgtcntcc agctcttcta nggccaactg ggcatgganc ttggccacgt 660
c 661

<210> 265
<211> 659
<212> DNA
<213> Homo Sapiens

<400> 265
ccatccaana taactttatt ccattttgca ttatttgata actatttcct tcccctcccc 60
acctccaact gcatctccta ctctgaaatg cctcttgagc agccaagggt ggccagttct 120
gctcctcatt ttcctgaana anaatctcag cctgaaagaa tatanagcta ggtgacatat 180
gggtggccaa ccgcttctcc tcaagttcca ananagtggg caattagtga aattccatca 240
gtcatgttaa aatatacttt caccaggtan acatccttct ttcaatgcta gaggacagtg 300
aaaaatgtag attaatgaga tctgtaactg tcttctctta actgtacacc cctcaggctg 360
aacgcgggag tgctgaacac atgccctcgg aagggaccct gaagacccaa gtgacctgca 420
ccataaaacc accccgaggg tcagccatgc tgccagcact caaaaagcag cagggccacc 480
tgctggaana actgggcacg gctctgggtg cctggccctg cctgcctcct ccacgtcctt 540
gganccaggt ctacggnagg accatgatct tcttctccan cttctgtgga aggaacanga 600
anttttcat gatgtcntcc actcttctag ggccaactgg gcatggactt ggccacgtc 659

<210> 266
<211> 620
<212> DNA
<213> Homo Sapiens

<400> 266
ccatccaaga taactttatt ccattttgca ttatttgata actatttcct tcccctcccc 60
acctccaact gcatctccta ttntnaaatg cctcttgagc agccaagggt ggccagttct 120
gctcctcatt ttcctgaana anaatctcag cctgaaagaa tatagagcta ggtgacatat 180
gggtggccaa ccgcttctcc tcaagttcca ananagtggg caattagtga aattccatca 240
gtcatgttaa aatatacttt caccaggtan acatccttct ttcaatgcta gaggacagtg 300
aaaaatgtag attaatgaga tctgtaactg tcttctctta actgtacacc cctcaggctg 360

aacgcgggag tgctgaacac atgccctcgg aagggaccct gaagacccaa gtgacctgca 420
ccataaaacc accccgaggg tcagccatgc tgccagcact caagaagcag cagggccacc 480
tgctggaaga cctgggcacg gctctgggtg cctggccctg cctgcctcct ccacgtcctt 540
ggagccaggt ctacngcang aacatgatct tcttctccac ttctgtggaa ggaacaggaa 600
ntttttcatg atgtcatcca 620

<210> 267
<211> 745
<212> DNA
<213> Homo Sapiens

<400> 267
cccccagac aggcctgcag tcaaatgctc caatcattcc tcaaggagtc aatgagccca 60
gcactactac aagtcagaaa tctggaagcg taaccacaga acagctccaa gaggttcttt 120
tgtcagctta tgaccctcaa attccaacac gggctgctgc cctgcgtact ctttcccact 180
ggatagagca gagagaagca aaagcccttg agatgcaaga gaagcttctc aagatattct 240
tggaaaactt ggaacatgaa gacacttttg tatatctatc tgcaattcag ggggttgccc 300
tgctgtcaga cgtctatcct gagaaaatct tgccggactt gttggctcaa tatgacagca 360
gcaaagacaa gcacacacca gagaccaaga atgaaagtcg gggaagtcct tatgcgaatc 420
gtcagggcat taggagacat ggtctcaaag taccgagaac ctttgatcca taccttcctg 480
aggggagtga gagatcctga tggtgctcac agggccagca gcttgggcaa ccttggggag 540
ctgtgccaga ggctggactt tctgctgggc tccgtggtcc atgaggtaac agcttgcctg 600
attgctgtgg ccaaaaacat tntntgaaag ttcaagttcg cannagctgg ccaanacaat 660
gtggggttgt gcctgcnngc tttcgggggа actcaaccca agaaaaagct tantgtaagg 720
gtggnttaan ccnccggtcc ttcaa 745

<210> 268
<211> 676
<212> DNA
<213> Homo Sapiens

<400> 268
ccatccaaga taactttatt ccattttgca ttatttgata actatttcct tcccctcccc 60
acctccaact gcatctccta ctctgaaatg cctcttgagc agccaagggt ggccagttct 120
gctcctcatt ttcctgaana anaatctcag cctgaaagaa tatagagcta ggtgacatat 180
gggtggccaa ccgcttctcc tcaagttcca ananagtggg caattagtga aattccatca 240
gtcatgttaa aatatacttt caccaggtag acatccttct ttcaatgcta gaggacagtg 300
aaaaatgtag attaatgaga tctgtaactg tcttctctta actgtacacc cctcaggctg 360
aacgcgggag tgctgaacac atgccctcgg aagggaccct gaagacccaa gtgacctgca 420
ccataaaacc accccgaggg tcagccatgc tgccagcact caagaagcag cagggccacc 480
tgctggaana cctgggcacg gctctgggtg cctggccctg cctgcctcct ccacgtcctt 540
gggagccagg tctacggcag ggaacatgat cttcttctcc agcttctgtg gaaggaacag 600
gaagtttttc atgatgtcat ccanctcttc taaggccaac tgggcatgga acttggccac 660
gtcatcgggc tccaaa 676

<210> 269
<211> 737
<212> DNA
<213> Homo Sapiens

<400> 269
aacaaagaca aagaaggcaa ggttttctac agcatcactg gccaaggagc tgacacaccc 60
cctgttggtg tctttattat tgaaagagaa acaggatggc tgaagctctt ctctcacgct 120
gtgtcatcca acgggaatgc agttgaggat ccaatggaga ttttgatcac ggtaaccgat 180
cagaatgaca acaagcccga attcacccag gaggtcttta aggggtctgt catggaaggt 240

gctcttccag gaacctctgt gatggaggtc acagccacag acgcggacga tgatgtgaac 300
acctacaatg ccgccatcgc ttacaccatc ctcagccaag atcctgagct ccctgacaaa 360
aatatgttca ccattaacag gaacacagga gtcatcagtg tggtcaccac tgggctggac 420
cgagagagtt tccctacgta taccctggtg gttcaagctg ctgaccttca aggtgagggg 480
ttaagcacaa cagcaacagc tgtgatcaca gtcactgaca ccaacgataa tcctccgatc 540
ttcaatccca ccacgtacaa gggtcangtg cctganaaag aaggctaacg tcgttatcac 600
caacactgaa aagtgactga tgcctgatgc cccccaatta ncccanccgt gggaagctgt 660
ntacaccata tngaaatgat gatgggtggg cnaatttgtn cgttcaccaa caaatnccan 720
gtggaacaac caatggg 737

<210> 270
<211> 726
<212> DNA
<213> Homo Sapiens

<400> 270
ccatccaaga taactttatt ccattttgca ttatttgata actatttcct tcccctcccc 60
acctccaact gcatctccta ctctgaaatg cctcttgagc agccaagggt ggccagttct 120
gctcctcatt ttcctgaana anaatctcag cctgaaagaa tatanagcta ggtgacatat 180
gggtggccaa ccgcttctcc tcaagttcca ananagtggg caattagtga aattccatca 240
gtcatgttaa aatatacttt caccaggtan acatccttct ttcaatgcta gaggacagtg 300
aaaaatgtag attaatgaga tctgtaactg tcttctctta actgtacacc cctcaggctg 360
aacgcgggag tgctgaacac atgccctcgg aagggaccct gaagacccaa gtgacctgca 420
ccataaaacc accccgaggg tcngccatgc tgccagcact caanaagcag cagggccacc 480
tgctggaana cctgggcacg gctctgggtg cctggccctg cctgcctcct ccacgtcctt 540
ggagccaggt ctacggcagg aacatgatct tcttctccac ttctgtggaa ggaacangaa 600
atttttcatg atgtctccan ctcttctagg gccactgggc atggancttg ggcncntcat 660
cgggctccaa anacactact gcttcancag gtgggtanaa atccttgaag angggctcac 720
acctcc 726

<210> 271
<211> 814
<212> DNA
<213> Homo Sapiens

<400> 271
ccatccaaga taactttatt ccattttgca ttatttgata actatttcct tcccctcccc 60
acctccaact gcatctccta ctctgaaatg cctcttgagc agccaagggt ggccagttct 120
gctcctcatt ttcctgaaga agaatctcag cctgaaagaa tatagagcta ggtgacatat 180
gggtggccaa ccgcttctcc tcaagttcca agagagtggg caattagtga aattccatca 240
gtcatgttaa aatatacttt caccaggtag acatccttct ttcaatgcta gaggacagtg 300
aaaaatgtag attaatgaga tctgtaactg tcttctctta actgtacacc cctcaggctg 360
aacgcgggag tgctgaacac atgccctcgg aagggaccct gaagacccaa gtgacctgca 420
ccataaaacc accccgaggg tcagccatgc tgccagcact caagaggcag cagggccacc 480
tgctggaaga cctgggcacg gctctgggtg cctggccctg cctgcctcct ccacgtcctt 540
ggagccaggt ctacggcagg accatgatct tcttctccag cttctgtggg agggaacagg 600
gaagtttttc aatgatgtca tccagctctt cctanggcca actgggcaag ggagcttggg 660
caacgtcatc ggggctccag acaaaactac gtgcttcanc aanggtggta aaanatcctt 720
gaaggacggg ggctcaacaa cccaagtanc ctttccnggg ctgaatcccc ngaagcaagc 780
aagnacaaac cacatgtttt gggaagctcc ggcg 814

<210> 272
<211> 862
<212> DNA
<213> Homo Sapiens

<400> 272
gtacactgaa cagaaaagat ctggaaggga aaatagaaga gcagcaacaa accagtcatg 60
aaagacccac tgatgtagct catagccacc ttgaacaaca gcagagccat gagacagccc 120
cccagacagg cctgcagtca aatgctccaa tcattcctca aggagtcaat gagcccagca 180
ctactacaag tcagaaatct ggaagcgtaa ccacagaaca gctccaagag gttcttttgt 240
cagcttatga ccctcaaatt ccaacacggg ctgctgccct gcgtactctt tcccactgga 300
tagagcagag agaagcaaaa gcccttgaga tgcaagagaa gcttctcaag atattcttgg 360
aaaacttgga acatgaagac acttttgtat atctatctgc aattcagggg gttgccctgc 420
tgtcagacgt ctatcctgag aaaatcttgc cggacttgtt ggctcaatat gacagcagca 480
aagacaagca cacaccagag accaagaatg aaagtcgggg aagtccttat gcgaatcgtc 540
agggcattag ggagacatgg tctcaaagta ccgagaacct ttgattcata ccttcctgan 600
gggagtgaga gattctggat ggtgctcaca agggcagcaa cttgggcaan cttgggggaa 660
ctggtgccag aggctggact ttcngctggg gctccgtggg ccaatggagg gtacaanctt 720
gccctgaatt gctgtgggcc aaaaacaaga tnggtgaaag tttaaagtta cgcaaaactg 780
ccaatacaat gttgggttgt tgccnggctg gnnttccggg ggaatcaagc ccaggaaaag 840
cctaccggan ggggccttaa ac 862

<210> 273
<211> 677
<212> DNA
<213> Homo Sapiens

<400> 273
ccatccaaga taactttatt ccattttgca ttatttgata actatttcct tcccctcccc 60
acctccaact gcatctccta ctctgaaatg cctcttgagc agccaagggt ggccagttct 120
gctcctcatt ttcctgaaga agaatctcag cctgaaagaa tatagagcta ggtgacatat 180
gggtggccaa ccgcttctcc tcaagttcca agagagtggg caattagtga aattccatca 240
gtcatgttaa aatatacttt caccaggtan acatccttct ttcaatgcta gaggacagtg 300
aaaaatgtag attaatgaga tctgtaactg tcttcnctta actgtacacc cctcaggctg 360
aacgcgggag tgctgaacac atgccctcgg aagggaccct gaagacccaa gtgacctgca 420
ccataaaacc accccgaggg tcagccatgc tgccaagcac tcaagaggca gcagggccac 480
ctgctggaan acctgggcac ggntctgggt gcctgggccc tgcctgcctc ctccangtcc 540
ttggggccaa gtctaaggga agggaccaat gatcttcttc cccaaacttc tgtggagggg 600
aaaaaaggaa ntttttcaag gnggtcatcc nangctcctc caaggggnca aaatgggggc 660
antggaacct tgggcaa 677

<210> 274
<211> 863
<212> DNA
<213> Homo Sapiens

<400> 274
gaaaacagca aagttgaagt caagtgattt tgctgttctg aagcagttgt tgcctctgtt 60
ggagaaggta tccaacacat accctgatcc ggtcatccaa gaactcgctg ttgatctccg 120
catcaccatc tctacccatg gagcctttgc cactgaggcc gtcagcatgg ctgcccaaag 180
tacactgaac agaaaagatc tggaagggaa aatagaagag cagcaacaaa ccagtcatga 240
aagacccact gatgtagctc atagccacct tgaacaacag cagagccatg agacagcccc 300
ccagacaggc ctgcagtcaa atgctccaat cattcctcaa ggagtcaatg agcccagcac 360
tactacaagt cagaaatctg gaagcgtaac cacagaacag ctccaagagg ttcttttgtc 420
agcttatgac cctcaaattc caacacgggc tgctgccctg cgtactcttt cccactggat 480
agagcagaga gaagcaaaag cccttgagat gcaagagaag cttctcaaga tattcttgga 540
aaacttggaa catgaagaca cttttgtata tctatctgca attcaggggg ttgccctgct 600
gtcagacgtc tatcctgaga aaatcttgcc ggacttgttg gctcaatatg acagcagcaa 660
agacaagcac acaccaagag accaagaatg aaagtcgggg aagtccttat gccaatcgtc 720
anggcattag ggagacatgg tctcaaagta accgagaacc tttgattcat accttcctga 780

aggggaatta gagattctga atggtgctca cagggccaac aaccttggcn aaccttgggg 840
aacctgtgcc anaaggctng gac 863

<210> 275
<211> 821
<212> DNA
<213> Homo Sapiens

<400> 275
ccatccaaga taactttatt ccattttgca ttatttgata actatttcct tcccctcccc 60
acctccaact gcatctccta ctctgaaatg cctcttgagc agccaagggt ggccagttct 120
gctcctcatt ttcctgaaga agaatctcag cctgaaagaa tatagagcta ggtgacatat 180
gggtggccaa ccgcttctcc tcaagttcca agagagtggg caattagtga aattccatca 240
gtcatgttaa aatatacttt caccaggtag acatccttct ttcaatgcta gaggacagtg 300
aaaaatgtag attaatgaga tctgtaactg tcttctctta actgtacacc cctcaggctg 360
aacgcgggag tgctgaacac atgccctcgg aagggaccct gaagacccaa gtgacctgca 420
ccataaaacc accccgaggg tcagccatgc tgccagcact caagaggcag cagggccacc 480
tgctggaaga cctgggcacg gctctgggtg cctggccctg cctgcctcct ccacgtcctt 540
ggagccaggt ctacggcagg accatgatct tcttctccaa gcttctgtgg agggaacagg 600
aagtttttca tgatgtcatc caagctcttc tanggccaac tgggcatgga gcttgggcac 660
gtcatcgggc tccagacaca ctacgtgctt cancaaggtg gtaaaagatt cttganggac 720
ggngctcanc acctcagtaa nctttctggc tgagtccccc gaaagcaaca gcacaancca 780
catgtntngg aaaccctgcg ttacttngaa cttcaacaac c 821

<210> 276
<211> 722
<212> DNA
<213> Homo Sapiens

<400> 276
aacagctgtg atcacagtca ctgacaccaa cgataatcct ccgatcttca atcccaccac 60
gtacaagggt caggtgcctg agaacgaggc taacgtcgta atcaccacac tgaaagtgac 120
tgatgctgat gcccccaata ccccagcgtg ggaggctgta tacaccatat tgaatgatga 180
tggtggacaa tttgtcgtca ccacaaatcc agtgaacaac gatggcattt tgaaaacagc 240
aaagttgaag tcaagtgatt ttgctgttct gaagcagttg ttgcctctgt tggagaaggt 300
atccaacaca taccctgatc cggtcatcca agaactcgct gttgatctcc gcatcaccat 360
ctctacccat ggagcctttg ccactgaggc cgtcagcatg gctgcccaaa gtacactgaa 420
cagaaaagat ctggaaggga aaatagaaga gcagcaacaa accagtcatg aaagacccac 480
tgatgtagct catagccacc ttgaacaaca gcagagccat gaagacagcc ccccagacag 540
gcctgcagtc aaatgctcca atcattcctc aaggagtcaa tgagcccagc actactacaa 600
gtcagaaatc tggaagcgtt accacagaac agctccaaga ggttcntttg tcagctttat 660
gaacctcaaa ttccaacacg gggctggtgc ctgcgttact cnttcccact gggntagaag 720
ca 722

<210> 277
<211> 805
<212> DNA
<213> Homo Sapiens

<400> 277
ccatccaaga taactttatt ccattttgca ttatttgata actatttcct tcccctcccc 60
acctccaact gcatctccta ctctgaaatg cctcttgagc agccaagggt ggccagttct 120
gctcctcatt ttcctgaaga agaatctcag cctgaaagaa tatagagcta ggtgacatat 180
gggtggccaa ccgcttctcc tcaagttcca agagagtggg caattagtga aattccatca 240
gtcatgttaa aatatacttt caccaggtag acatccttct ttcaatgcta gaggacagtg 300

aaaaatgtag attaatgaga tctgtaactg tcttctctta actgtacacc cctcaggctg 360
aacgcgggag tgctgaacac atgccctcgg aagggaccct gaagacccaa gtgacctgca 420
ccataaaacc accccgaggg tcagccatgc tgccagcact caagaggcag cagggccacc 480
tgctgggaag acctgggcac ggctctgggt gcctgggccc tgcctgcctc ctccacgtcc 540
ttggagccaa ggtctacggc aggaccatga tcttcttctc cagcttctgt ggagggaaca 600
ngaagttttt caagatgtca tccaactcct ccaagggcca actggggcat gggagccttg 660
gcacgtcatn cgggctccag acacactacg gtgcttcaac aagggnggta nagattcttg 720
anggacgggg ctcaaacaat gaacctcant tacctttcng gctgagtccc cnaaagcaac 780
aagtacaaac cacatgtttt gggaa 805

<210> 278
<211> 1358
<212> DNA
<213> Homo Sapiens

<400> 278
agaactcaga gctgctcttc ctctgtggcc agttggggac cagcatcatg aagtggatgg 60
tggtggtctt ggtctgcctc cagctcttgg aggcagcagt ggtcaaagtg cccctgaaga 120
aatttaagtc tatccgtgag accatgaagg agaagggctt gctgggggag ttcctgagga 180
cccacaagta tgatcctgct tggaagtacc gctttggtga cctcagcgtg acctacgagc 240
ccatggccta catggatgct gcctactttg gtgagatcag catcgggact ccaccccaga 300
acttcctggt ccttttgac accggctcct ccaacttgtg ggtgccctct gtctactgcc 360
agagccaggc ctgcaccagt cactcccgct tcaaccccag cgagtcgtcc acctactcca 420
ccaatgggca aaccttctcc ctgcagtatg gcagtggcag cctcaccggc ttctttggct 480
atgacaccct gactgtccag agcatccaan gtccccaacc aggagttcgg cttgagtgag 540
aatnagcctg ggtaccaact tcgtctaagc gcagtttgat ggcatcatgg gcctggcctt 600
accctgctct gtccgtggat gaggccacca cagtatgcag ggcatgtgca ggagggcgcc 660
ctnaaccagc cccgtnttca gggtttacnt cagcaaccag cagggctccc agcgggggag 720
cggttgtcct ttgggggtgt ggatagcagc ntgtacacgg ggcagatcta ctgggcgcnt 780
gtcacccagg aactctactg gcagattggc attgaagagt tcctcatcgg cggccaggcc 840
tccggctggt gttctgaggg ttgccaggcc atcgtggaca caggcacctc tctgctcact 900
gtgccccagc agtacatgag tgctcttctg caggccacag gggcccagga ggatgagtat 960
ggacagtttc tcgtgaactg taacagcatt cagaatctgc ccagcttgac cttcatcatc 1020
aatggtgtgg agttccctct gccaccttcc tcctatatcc tcagtaacaa cggctactgc 1080
accgtgggag tcgagcccac ctacctgtcc tcccagaacg gccagcccct gtggatcctc 1140
ggggatgtct tcctcaggtc ctactattcc gtctacgact tgggcaacaa cagagtaggc 1200
tttgccactg ccgcctagac ttgctgcctc gacacgtggg ctcccctctt cctcttgacc 1260
ctgcaccctc ctagggcatt gtatctgtct ttccactctg gattcagcct tctttttctg 1320
gactctggac tttctctaat aataaatagt tcttcttt 1358

<210> 279
<211> 702
<212> DNA
<213> Homo Sapiens

<400> 279
gaagcaatga atacgcaatt agaactttca gaacaactta aatttcagaa caactctgaa 60
gataatgtta aaaaactaca agaagagatt gagaaaatta ggccaggctt tgaggagcaa 120
attttatatc tgcaaaagca attagacgct accactgatg aaaagaagga aacagttact 180
caactccaaa atatcattga ggctaattct cagcattacc aaaaaaatat taatagtttg 240
caggaagagc ttttacagtt gaaagctata caccaagaag aggtgaaaga gttgatgtgc 300
cagattgaag catcagctaa ggaacatgaa gcagagataa ataagttgaa cgagctaaaa 360
gagaacttag taaaacaatg tgaggcaagt gaaaagaaca tccagaagaa atatgaatgt 420
gagttagaaa atttaaggaa agccacctca aatgcaaacc aagacaatca gatatgttct 480
attctcttgc aagaaaatac atttgtagaa caaagtagta aatgaaaaag tcaaacactt 540

agaagatacc ttaaaaagaa cttgaatctc aacacagtat cttaaaaaga tgagggtaac 600
ttatatgaat aatccttaag tttaaaactt gaaaatggga tgcctcaacc attttaaagg 660
gtngaggttt tttccangna accgggggaa gaccttaaaa gg 702

<210> 280
<211> 874
<212> DNA
<213> Homo Sapiens

<400> 280
aactcaaaac agtgttaagt tcctatgctg ttagtactgt atcttgtcca cacctcaaac 60
aacagtgaga tctctgagca catggtctgt acctcaacca cttttctatc accagggtct 120
agaatagttg ggcatttaaa taaaatttgc taaatgaatg aaaaatccaa aataaatcat 180
gaagccattt ataaatcaca ccaatcttgc ttgggttaaa caatagaaag taacactttt 240
gaaagagaag gcaaacaggt gttagagggg caagaatgtg agctcgagga aaagacagct 300
acgaactgtg tttttaacaa ctcattattt ggctactata tttcccaatc tattctaaca 360
ctaagaagaa tctgtctaat taattgtgac aacatctgca aaaccatagt tacctatttt 420
ttcttccaac tcttttactg aagacagagg atcatttttt acagaaggtg attttgctaa 480
ggaatcctan attttacagg ggggaaaaaa aaacacnaaa caaaacaaaa accagaatca 540
gaattcattt tccataatga actggccatc ntgttaagca taanaaaatc actatcaaag 600
anaattccta cagaaaccaa tttggtcaca gaatttccct tgttanacca gaaaattaat 660
actgaactta ctatgcatat ggcatttact attaaaaaaa aaaaagtant aaccaaggcc 720
aaganaaaca acctgaaaca ttaaatacat ntttataagg aaaaantaaa tgaattttaa 780
tcttaatttt aaanaaaaac cnaaaatttt nncatacccc cccgctctta cttaaaaant 840
gncttaccaa aatactaanc ctttccccaa aacc 874

<210> 281
<211> 730
<212> DNA
<213> Homo Sapiens

<400> 281
acaaaacagc agctggaaag agaaatgtag gtggcagacg agccaggcac gaggtttcag 60
attggaaggg accaagatga ggaccaaggt gtggctgcct gactaggaac gctgtgggct 120
ggcccaggct ctcgccacac atcctgggan aactgccata ggccctagaa ggagggatga 180
aaggcgtatg ggagggaana cagcggtccc cggatcagca gcagcaccac catcctctga 240
tggcccctgg gcagtccgcc agctcggaag cactcagggc tggagcctgg gctctaagca 300
tgggccccag gagccanaca ggagggaggc agcaggaang gctggcatgg aagggctgag 360
ttctattggg gtcccacgcg ggcaagggaa ccaggactca tccctgcttg tcagccaatc 420
agcttcttca ggaagcctcc aactgatcct catccttgat gcccacaaac ttgtccacca 480
cgtccccatt cttcatggcc agcacagtgg gcaccgctga cacctcatac tcaatggcga 540
agtctgtgtg gtcntcaata tccaccttgg ccatcaccac cttcccgtgc tgcttggcca 600
ccatcttctc taacctccgn cccangatct tcagggtcca caccactgtg cgtggaaatc 660
cacaaccact ggtgtctcct gtttgaacac tccgtcttga aantcngtcc ntcctgnata 720
ttaaaggttg 730

<210> 282
<211> 699
<212> DNA
<213> Homo Sapiens

<400> 282
agaactcaga gctgctcttc ctctgtggcc agttggggac cagcatcatg aagtggatgg 60
tggtggtctt ggtctgcctc cagctcttgg aggcagcagt ggtcaaagtg cccctgaaga 120
aatttaagtc tatccgtgag accatgaagg agaagggctt gctgggggag ttcctgagga 180

cccacaagta tgatcctgct tggaagtacc gctttggtga cctcagcgtg acctacgagc 240
ccatggccta catggatgct gcctactttg gtgagatcag catcgggact ccaccccaga 300
acttcctggt ccttttgac accggctcct ccaacttgtg ggtgccctct gtctactgcc 360
agagccaggc ctgcaccagt cactcccgct tcaaccccag cgagtcgtcc acctactcca 420
ccaatgggca aaccttctcc ctgcagtatg gcagtggcag cctcaccggc ttctttggct 480
atgacaccct gactgtccag agcatccaan gtccccaacc aggagttcgg cttgagtgag 540
aatnagcctg ggtaccaact tcgtctaagc gcanttttga tgggatcaag ggcctgggcc 600
taacctggct ctgtcccgtt ggattaaggc caccacaagc tatntagggc nattnggntc 660
aaggatgggt gtcnctttat nnagcccccg tnctttcaa 699

<210> 283
<211> 759
<212> DNA
<213> Homo Sapiens

<400> 283
gaaattgaga actgatttaa tactaaagtt ctgaataaag gtgtgcactt tatgattgat 60
tctatctttt tgcacaagtt ggatactcca gtttcccatc ccaacatgtt gttcgcaatg 120
tgtgagaacg tgatgaaaga cgatatcccc gtttacacac aaattcaact gattcacctg 180
ttctcgaata aagcttctgt ttggctgtcc accttaatgc tatgttataa ttttccataa 240
tttctcggga tattacacac ggatgtaagc attttggtgg ttctgaccat tgtccatttc 300
tacatgttat tcgcttgtta ccctcaagtt gatacaagtt ctggcattgg tactcaactg 360
atgaagctgg agcatatact gacaacggga atgaagtaat gtccccattg tcaataggtg 420
gagggggccc acattttcct gtagaatctt tgcattgagg tggttccgtc cagtttccat 480
ttaaacacat cacttcttca tccccaaaca tttcataagg gctcctacat tgataacgta 540
ctctctcacc agatggatat ttactcatct gtctcgacac tatataagca ttttgtactg 600
tgggcggatt ccacangang tgtctctgca tgttgggctt cctgtccact gctattaatg 660
catgttacat tactggctcc accattttgt aatatgttgc acaagtttta gtccttgctc 720
acccccttat acacatcctt ctctctccat gggtttggc 759

<210> 284
<211> 764
<212> DNA
<213> Homo Sapiens

<400> 284
ggaccgcgat gacgcagact ggagggaggt gatgatgccc tattcgacag aactgatatt 60
ttatattgaa atggatcctc cagctcttcc accaaagcca cctaagccaa tgacttcagc 120
agttccaaca tggaatgaag gacagttctg tttctcttca ggatgcagaa tggtactggg 180
gggatatttc aagggaggag gtaaatgaca aattgcggga tatgccagat gggaccttct 240
tggtccgaga tgcctcaaca aaaatgcagg gagattatac tttgactttg cggaagggag 300
gcaataataa gttaataaag atctatcacc gggatggtaa atatggcttt tctgatcctc 360
tgacatttaa ttccgtggtg gagctcatta accactatca ccatgaatct cttgctcagt 420
acaatcccaa acttgatgtg aagctgatgt acccaagtgt ccagatacca acaggatcag 480
ttggtaaaag aagataatat tgatgcagta ngtaaaaaac tgcaagaata ccactctcaa 540
gtatcaggag aagagtaaag gagtatgata ngctgtatga agaatatact agaacatccc 600
aaggaaatac agatgaagag gactgcaata gaaagctttt aatgaaaaca ttaaaatatt 660
tggaagagca ntgtcacaca caaggaacca acattnccaa agaatatatt gagnngattt 720
cncaaaanaa ggggaaatga aaagggggan ttgaacgaaa ttta 764

<210> 285
<211> 586
<212> DNA
<213> Homo Sapiens

<400> 285
gcattgcacc ttttctttac ccatacaaac aagttacaaa ggtttcaaac aacagntcat 60
tctttaggct aaggaaacac catacaagca ccaacttcat tttangattc aaagctcacc 120
atccccacaa aaagaatgct attccncatc tcagagaaac aggcaggaag gacanaaggg 180
gttagttaca gtgatcaatt ttagcgtttg ctaaaacnca caaattcnag nctttttaag 240
ttcaagtttt ggtacagaag tatacattca actatgagtg ccacgttttc ccatcaaaca 300
ttggnctggc aacaaactgt tttgttggct tctgaacata atacttcttc anagggaggg 360
gctggtgaaa tgctgaancc taaattatgt tggnaagaaa caaagtacct tcanttgaag 420
gtttttttta acanctnggc ttaaattatt taaatgaaan cccaagcctc ccnatttncc 480
tttggtngcc ttttncanaa aatcccattc natcacaaaa ccctaaaaag ccttcttcgt 540
ngggggggaaa aaanana ctg ccaaangcaa aaacaaaaac ncccaa 586

<210> 286
<211> 666
<212> DNA
<213> Homo Sapiens

<400> 286
gcctggagtt cagtgggtgc agcctgcttg cgagctgagg ccagacaggg gggcgcctac 60
ggacggaaaa gaaaagttga ttacaaacgg gaccatattt tgcttcgaaa tggaaccagc 120
agttagcgag ccaatgagag accaagtcgc acggactcat ttgacagagg acactcccaa 180
agtgaatgct gacatagaaa aggttaacca gaatcaggcc aagagatgca cagtgatcgg 240
gggctctgga ttcctggggc agcacatggt ggagcagttg ctggcaagag gatatgctgt 300
caatgtattt gatatccagc aagggtttga taatccccag gtgcggttct ttctgggtga 360
cctctgcagc cgacaggatc tgtacccagc tctgaaaggt gtaaacacag ttttccactg 420
tgcgtcaccc ccaccatcca gtaacaacaa ggagctcttt tatagaagtg aattacattg 480
gcaccaagaa tgtcattgaa acttgcaaag aggctggggt tcagaaactc attttaacca 540
gcagtgccat gtcatctttg agggcgtcga tatcaagaat ggaactgaaa gaccttccct 600
nagccattga aaccaattga cctactacac aaganactaa agatcttaca ngagaaggca 660
atttct 666

<210> 287
<211> 782
<212> DNA
<213> Homo Sapiens

<400> 287
gacagagaac aaatcggtat aatatgaagc tgcctgcttc aagaaatcca aatccagttc 60
catgaaggaa gaaatgtctg tttttgccgc cctcatcgtc acggaaagag tagggtgcgc 120
tctctgccta gcagaaggag tcacaggctc agagcaaact cattcaaagg atgttatttc 180
atcaatccac aggggaagga gtgactggct gagcaacgtg tcgagagagc ccagcctcca 240
gtgtccctca cttgaccctc cgcaggtggc gaaagctctg cacggtcctc tccatagcat 300
catccatggt cactagtggc tggtagccca tggccttttt ggctctctcg cagctgtagt 360
agtggaatgt gccagccagt gcgacccgca tgggtgtgaa ggtgggctgc agctggatga 420
caggactgat caccatcacc agcagggata gcaggagggc caggtagtag gccacccagt 480
aggggatgtg gtacttgggg gcctcataat tgaggcctgt caaggatgcg agacaggaat 540
gtccaaaaag ggatgggctc atcattggtg atgtgaaatg ccttcccacc cagtgtcgag 600
tctcngggan anctgctctg ccgccaagat tgtccatggg accaaggttc tcacaaaggt 660
gaaagtccac caagttcctc ccaatttcca atcacgaaac ttcaaccttg ccgttcctgg 720
ctgcctccat gaaggatggg ttacaaactg ccgggttccc tttggggccg aaaaattgcc 780
aa 782

<210> 288
<211> 707
<212> DNA

<213> Homo Sapiens

<400> 288
gtggttccag cgccggtttt gaccgccaca ttaccatttt ttcacccgag ggtcggctct 60
accaagtaga atatgctttt aaggctatta accagggtgg ccttacatca gtagctgtca 120
gagggaaaga ctgtgcagta attgtcacac agaagaaagt acctgacaaa ttattggatt 180
ccagcacagt gactcactta ttcaagataa ctgaaaacat tggttgtgtg atgaccggaa 240
tgacagctga cagcagatcc caggtacaga gggcacgcta tgaggcagct aactggaaat 300
acaagtatgg ctatgagatt cctgtggaca tgctgtgtaa aagaattgcc gatatttctc 360
aggtctacac acagaatgct gaaatgaggc ctcttggttg ttgtatgatt ttaattggta 420
tagatgaaga gcaaggccct caggtatata agtgtgatcc tgcaggttac tactgtgggt 480
ttaaagccac tgcagcggga gttaaacaaa ctgagtcaac cagcttcctt gaaaaaaaag 540
tgaagaagaa atttgattgg acatttgaac agacagtgga aactgcaatt acatgcctgt 600
ctactgttcc atcaattgan ttcaaacctt cagaaataga aattgggagt aatgacagtt 660
gaaaatccta aattcangan tcctacagaa gcagagattg atgctca 707

<210> 289
<211> 673
<212> DNA
<213> Homo Sapiens

<400> 289
atggcaccat cacaacaaag gaacttggaa ctgtcatgag gtcactgggt cagaacccaa 60
cagaagctga attgcaggat atgatcaatg aagtggatgc tgatggtaat ggcaccattg 120
acttccccnn atttttgact atgatggcta gaaaaatgaa agatacagat agtgaagaag 180
aaatccgtga ggcattccga gtctttgaca aggatggcaa tggttatatc agtgcagcag 240
aactacgtca cgtcatgaca aacttaggag aaaaactaac agatgaagaa gtagatgaaa 300
tgatcagaga agcagatatt gatggagacg gacaagtcaa ctatgaagaa ttcgtacaga 360
tgatgactgc aaaatgaaga cctactttca actccttttt ccccccctcta gaagaatcaa 420
attgaatctt ttacttacct cttgcaaaaa aaaaaaaaat aagncanaaa annnataaaa 480
aaaaaaacnc gagagtactt ctaaagcggc cgcgggccna tcgattttcc acccgggtgg 540
ggtaccaggt aagtgtccca attcgcccta taggggagtc gtattacaat tcacggggcc 600
gtcgttttta aaacgtcntg acgggggaaa accctggngt taccaactta atcccccttg 660
caacaaatnc ccc 673

<210> 290
<211> 573
<212> DNA
<213> Homo Sapiens

<400> 290
gcaagaggta agtaaaagat tcaatttgat tcttctanag gggggaaaaa ggagttgaaa 60
gtaggtcttc attttgcagt catcatctgt acgaattctt canagttgac ttgtccgtct 120
ccatcaatat ctgcttcnct gatcatttca tctacttctt catctgttag ttttttcnccn 180
aagtttgtca tgacgtgacg tagttctgct gcactgatat aaccattgcc atccttgtca 240
aagactcgga atgcctcacg gatttcttct tcactatctg tatctttcan ttttcnagcc 300
atcatagtca aaaattcggg gaantcaatg gngccattac catcagcatc cacttcattg 360
atcatatcct gnaattcaan cttctgttgg gttntgaccc antgaccnca nggacaagtt 420
ccaagttccc tttggttgtg aagggtgcca nctcgtgccc gaattccttt gggntccnac 480
gangggtcna accctgcana ggngccgcga ancctccaan cttttggttc ccctttanat 540
ngagggttaa atttcgaact ttggnttttt tcc 573

<210> 291
<211> 819
<212> DNA

<213> Homo Sapiens

<400> 291
aaagaagaac tatttattat tagagaaagt ccagagtcca gaaaaagaag gctgaatcca 60
gagtggaaag acagatacaa tgccctagga gggtgcaggg tcaagaggaa gaggggagcc 120
cacgtgtcga ggcagcaagt ctaggcggca gtggcaaagc ctactctgtt gttgcccaag 180
tcgtagacgg aatagtagga cctgaggaag acatccccga ggatccacag gggctggccg 240
ttctgggagg acaggtaggt gggctcgact cccacggtgc agtagccgtt gttactgagg 300
atataggagg aaggtggcag agggaactcc acaccattga tgatgaaggt caagctgggc 360
agattctgaa tgctgttaca gttcacgaga aactgtccat actcatcctc ctgggccctt 420
gtggcctgca gaagagcact catgtactgc tggggcacag tgagcagaga ggtgcctgtg 480
tccacgatgg cctggcaacc ctcagaacac cagccggagg cctggccgcc gatgaggaac 540
tcttcaatgc caatctgcca gtagagttcc tgggtgacan gcgcccagta gatctgcccc 600
gtgtacangc tgctatccac acccccaaag gacaaccgct cccccgctgg gagccctgct 660
ggttgctgan gtaaaccctg aanacggggc tggttnaggg cgccctcctg cacatgccct 720
gcatactgtg gtggcctcat ccacggncna aaccanggta aggcaaggcc catgatgcca 780
tcaaactgcc ataacaaatt tgtacaaggc tcaatccca 819

<210> 292
<211> 664
<212> DNA
<213> Homo Sapiens

<400> 292
ctcgcgctcg cgctggtggc ggtcgcctgg gtccgcgccg aggaagagct aaggagcaaa 60
tccaagatct gtgccaatgt gttttgtgga gccggccggg aatgtgcagt cacagagaaa 120
ggggaaccca cctgtctctg cattgagcaa tgcaaacctc acaagaggcc tgtgtgtggc 180
agtaatggca agacctacct caaccactgt gaactgcatc gagatgcctg cctcactgga 240
tccaaaatcc aggttgatta cgatggacac tgcaaagaga agaaatccgt aagtccatct 300
gccagcccag ttgtttgcta tcagtccaac cgtgatgagc tccgacgtcg catcatccaa 360
tggctggaan ctgagatcat tccagatggc tggttctcta aaggcagcaa ctacagtgaa 420
atcctagaca agtattttaa agaactttga taatggtgat tctcgcctgg actccaagtg 480
aattcctgaa gtttgtggga acangaatga aactgccatc aatattacaa cgtttccagn 540
accaagggag aacaacaagt ttgcctaang ggactccggt ngttgatgcc tctcaatttg 600
aactggtctg gatgaaaaat gcctgattgg gnaattnaag cttcccaant agtttcncca 660
aatg 664

<210> 293
<211> 719
<212> DNA
<213> Homo Sapiens

<400> 293
cactttaatt tctttattca tcaatagtat ccgaaaagga agaatcagga gttacaaaaa 60
caagttaaat gcaatatana agcctactaa atacaaatac aagttcacaa acacatatgc 120
aacagaaact tgtttanatt gtttcttgaa gtttgactac ttaaaaacat aggtgtaaag 180
gaaagacatt cagactggtc cacgtgggct tgttagcagg canaggaacc ctgctttcca 240
aaaactgata tagtccaaag tcacggcatg tgggaatgtt tccatggaca ctggatctta 300
acagatgcta tagtgtttac aaaactacac acacagagaa agcccaagga agcctgcagg 360
ctaagcccta tgcttttaga gggctgaagg aaccaaacct agtttaatcc tgtttgtttg 420
ctccatgcaa aactttatgg aagactcccc agactaggct atttagcagc ttccatgaat 480
ggtcctcaga tcatgtgatt ctacggcata nacgacagct gccctattta cacagaagct 540
gcagaactca agaagaatgt ggatttgctc ttggganttc aatgttgcag ggtanantaa 600
tcttgggatg ataaccatgt tctaaatgac tagtgaanaa acctgtggtt tcttgctttt 660
aacaaattgg tgtactcttg cccctcccat aatgtccaag ggctgggtaa aacctttga 719

<210> 294
<211> 762
<212> DNA
<213> Homo Sapiens

<400> 294
agctaaggag caaatccaag atctgtgcca atgtgttttg tggagccggc cgggaatgtg 60
cagtcacaga gaaaggggaa cccacctgtc tctgcattga gcaatgcaaa cctcacaaga 120
ggcctgtgtg tggcagtaat ggcaagacct acctcaacca ctgtgaactg catcgagatg 180
cctgcctcac tggatccaaa atccaggttg attacgatgg acactgcaaa gagaagaaat 240
ccgtaagtcc atctgccagc ccagttgttt gctatcagtc caaccgtgat gagctccgac 300
gtcgcatcat ccagtggctg gaagctgaga tcattccaga tggctggttc tctaaaggca 360
gcaactacag tgaaatccta gacaagtatt ttaagaactt tgataatggt gattctcgcc 420
tggactccag tgaattcctg aagtttgtgg aacagaatga aactgccatc aatattacaa 480
cgtatccaga ccaggagaac aacaaagttg cttaggggac tctgtgttga tgccctcatt 540
gaactgtctg gatgaaaatg ctgattggna actcagcttc caagagtttc tcaaagtgcc 600
ctcaaaccca tctttcaacc ctcctgagaa agaagtgtgc cctgngaggg attaaacgta 660
atgcagatgg agnctgagac cnaaggtgga ccngttnacc gcctgtgtcc ggtgcccggt 720
ggaaattggg tcnggtncag ccatgaacct gttacgggaa ag 762

<210> 295
<211> 708
<212> DNA
<213> Homo Sapiens

<400> 295
cactttaatt tctttattca tcaatagtat ccgaaaagga agaatcagga gttacaaaaa 60
caagttaaat gcaatataga agcctactaa atacaaatac aagttcacaa acacatatgc 120
aacagaaact tgtttanatt gtttcttgaa gtttgactac ttaaaaacat aggtgtaaag 180
gaaagacatt cagactggtc cacgtgggct tgttagcagg cagaggaacc ctgctttcca 240
aaaactgata tagtccagag tcacggcatg tgggaatgtt tccatggaca ctggatctta 300
acagatgcta tagtgtttac aaaactacac acacagagaa agcccaagga agcctgcagg 360
ctaagcccta tgcttttaga gggctgaagg aaccaaacct agtttaatcc tgtttgtttg 420
ctccatgcaa aactttatgg aagactcccc agactaggct atttagcagc ttccatgaat 480
ggtcctcaga tcatgtgatt ctacggcata gacgacagct gccctattta cacagaagct 540
gcagaactca agaggaatgt ggatttgctc ttgggagttc aatgttgcag ggtaaaagta 600
gtcctggatg ataaccatgt tccaaatgac taagtgaaga gacactgtgg gttcctgcct 660
tttaacaaaa tgggggtact cctgcccctc ctccccanaa atgtccaa 708

<210> 296
<211> 652
<212> DNA
<213> Homo Sapiens

<400> 296
cactttaatt tctttattca tcaatagtat ccgaaaagga agaatcagga gttacaaaaa 60
caagttaaat gcaatataga agcctactaa atacaaatac aagttcacaa acacatatgc 120
aacagaaact tgtttanatt gtttcttgaa gtttgactac ttaaaaacat aggtgtaaag 180
gaaagacatt cagactggtc cacgtgggct tgttagcagg cagaggaacc ctgctttcca 240
aaaactgata tagtccagag tcacggcatg tgggaatgtt tccatggaca ctggatctta 300
acagatgcta tagtgtttac aaaactacac acacagagaa agcccaagga agcctgcagg 360
ctaagcccta tgcttttaga gggctgaagg aaccaaacct agtttaatcc tgtttgtttg 420
ctccatgcaa aactttatgg aagactcccc aagactaggc tatttagcag cttccatgaa 480
tggtcctcag atcaagtgat tctacggnat anacgacaag ctgccctatt tacacagaag 540
ctgcangaac tcaagaggga atgtgggatt gcccctgggg agttcaatgg ttgcangggt 600

aaaagttant cttgggntga ataaccaggt ttctaaaatg accaaattga aa 652

<210> 297
<211> 879
<212> DNA
<213> Homo Sapiens

<400> 297
cactttaatt tctttattca tcaatagtat ccgaaaagga agaatcagga gttacaaaaa 60
caagttaaat gcaatataga agcctactaa atacaaatac aagttcacaa acacatatgc 120
aacagaaact tgtttagatt gtttcttgaa gtttgactac ttaaaaacat aggtgtaaag 180
gaaagacatt cagactggtc cacgtgggct tgttagcagg cagaggaacc ctgctttcca 240
aaaactgata tagtccagag tcacggcatg tgggaatgtt tccatggaca ctggatctta 300
acagatgcta tagtgtttac aaanctacac acacagagaa agcccaagga agcctgcagg 360
ctaagcccta tgcttttaga gggctgaagg aaccaaacct agtttaatcc tgtttgtttg 420
ctccatgcaa aactttatgg aagactcccc agactaggct atttagcagc ttccatgaat 480
ggtcctcaga tcatgtgatt ctacggcata gacgacagct gccctattta cacagaagct 540
gcagaactca agaggaatgt ggatttgctc ttgggagttc aatgttgcag ggtagaagta 600
gtcctggatg ataaccatgt tccnaaatga ctagtgaaga gacactgtgg tttcctgcct 660
ttaacaaant ggtgtactcc ttgccctcct ccaatantgt ccaaagggct ggtaaaaacc 720
ctttgattaa aggcgtgctg cctgttgagt tccccaangg nacttgggac angggancg 780
catttcaaga ccggaacaaa ttgggagttt tgaaaaaagt ttttaaatng ggaatgggtt 840
acataaaaan gcttgaaatg gctaaaacaa aggngggaa 879

<210> 298
<211> 697
<212> DNA
<213> Homo Sapiens

<400> 298
aaagaatcgg atatgaaggt gccaactgta agtttgaaag tatctgaaag tgtaattgat 60
gtgaaaacaa ctatggaaag tatatctaat acgtctacgc agtctctcac agcagaaaca 120
aaggacatag ctttggaacc taaggaacaa aaacatgaag acaggcagag caatacacct 180
tctcctcctg ttagtacctt ttcatcaggt acttctacca ccagtgatat tgaagtttta 240
gatcatgaaa gtgtaataag tgagagctca gcgagctcga gacaagagac tacagattca 300
aaatcaagtc ttcacttgat gcagacatct tttcagcttc tctctgcatc tgcttgtcct 360
gaatataatc gtttagatga tttccaaaaa ctcactgaga gttgctgttc atctgatgct 420
tttgaaagaa tagactcatt tagtgtacag tcattagata gccggagtgt aagtgaaatc 480
aattcaagat gatgaattgt caggcaaggg gatatgcttt agtgcctatt ataagttaat 540
tcttcaactc caaaagtcta aaacagttga atctgccgaa ggaaaatctg aagaagtaaa 600
tgaaacatta agttatacca ctgaggaagc agaaatggga agaaaagtgg gcgaaagtgg 660
caactccccg gttaacngng aaaangcctg gatatcc 697

<210> 299
<211> 510
<212> DNA
<213> Homo Sapiens

<400> 299
aaanaatnaa ttatgttaan aactttatta ttttcnantc cttttaaang gntgtnaaat 60
aatacttcnt ccaaatcntt taaatgttnt naangccntt gcnaaatcct tataaataaa 120
ttttcnccct tatccaancn catcnanaaa acattgaata tgttcaggtt tcncnggann 180
ggtnccnaaa ggnnccncnt tttatacnga cttaattgtn aaagcngggt gaaataaatt 240
ttccnatcna aatttttttt aagtttaaat cnttcccncn ttaaatttcn nanagtgtcc 300
gtgtnactcc tacttttaaa ggaaaaaaat tantttaaaa tttaatancc cccgatttaa 360

taatttttta ctttaacncn taatgttcnt tttcctgaac nntaattaan aaatgttgaa 420
attttaaatg tnaaanantc caantttccg tntgttaaca ttacncctcc aatgttcnta 480
atatatntnt taacccntnc caattatnga 510

<210> 300
<211> 625
<212> DNA
<213> Homo Sapiens

<400> 300
attagatagc cggagtgtaa gtgaaatcaa ttcagatgat gaattgtcag gcaagggata 60
tgctttagtg cctattatag ttaattcttc aactccaaag tctaaaacag ttgaatctgc 120
tgaaggaaaa tctgaagaag taaatgaaac attagttata cccactgagg aagcagaaat 180
ggaagaaagt ggacgaagtg caactcctgt taactgtgaa cagcctgata tcttggtttc 240
ttctacacca ataaatgaag gacagactgt gttagacaag gtggctganc agtgtgaacc 300
tgctgaaagt cagccanaan cactttctga caaggaanat gtttgcaata cagttgaatt 360
tctgaatgaa aaagcnggaa aaaagggang ctcagttatt atctcttagt aaggaaaaag 420
cacttctagg aagaagcttt ttgatacctg aananatgaa atgttcacag tngaaaggaa 480
naanngcagt ancatttccn tccttgaaan gattnngttt actcaaagga attngnnnaa 540
nccngtanta gaaaagtttc aaacctaagn ccggnaaaag aggaagagat gcctggccta 600
aaaaaaggga aatccacnga ccatt 625

<210> 301
<211> 792
<212> DNA
<213> Homo Sapiens

<400> 301
aaaaantaaa ttatnttaaa aactttatta tttncnatnc attttatagg gtantaaaat 60
aatactnctn caaaatcatt taaatnttat tgatgccatt gcaaaatcat tataaataaa 120
tttnctccat tatccaatca catctaaata acattgaata tntacaggtt nctctggata 180
ggtaccaaaa ggtaccacnt tttatacaaa cttaattgtg aaanctgggt gaaataaatt 240
tncaaatcaa aatttttttt aantttaaat catncactct ttaaatttca aacagtgtca 300
gtgtgacnct tacttttaaa ggaaaaaaat tagtttaaaa tttaatancc acanatttaa 360
taatttttta ctttaacact taatgtacat tttcatganc agtaattaaa atatnttgaa 420
attttaaatn tgaaaaattt caaagtttca gtatnttaac attacncttc aaatgttctt 480
aatatatata taaacactta caaattataa atacaactag ttgtntntct acaatacata 540
tntgaacacc attcttcttc tctagccatn tttatntgan gataaagtaa taaatctctg 600
tgctattcaa gggaaaaaaa atgaatgctt taaaaaataa atctttaaaa aataattcca 660
aaaataaagt tcaaatattg cacaaaaata atttaactgt aaatattact ncntagtgta 720
aacaatttta aaaaaatttt acactctaca ntaaatccnc ttctnattct ttaaaaaaat 780
tatgggaaat cc 792

<210> 302
<211> 738
<212> DNA
<213> Homo Sapiens

<400> 302
aaagagtaaa ttatgttaag aactttatta ttttcgattc attttatagg gtagtaaaat 60
aatacttctt caaaatcatt taaatgttat tgatgccatt gcaaaatcat tataaataaa 120
ttttctccat tatccaatca catctagata acattgaata tgtacaggtt tcnctggata 180
ggtaccaaaa ggtaccacat tttatacaga cttaattgtg aaagctgggt gaaataaatt 240
ttcagatcaa aatttttttt aagtttaaat cattcactct ttaaatttca gacagtgtca 300
gtgtgactct tacttttaaa ggaaaaaaat tagtttaaaa tttaatagcc acagatttaa 360

taatttttta ctttaacact taatgtacat tttcatgagc agtaattaag atatgttgaa 420
attttaaatg tgaaagattt caaaggtttc agtatgttaa cattactctt caaatgttct 480
taatatatat ataaacactt acaaattata gatacaacta gttgtatatc tacaatacat 540
atatgaacac cattcttctt ccccnagcca tatttatatg agggataaag taataaatct 600
ctggtgctat tcaaggnaaa aaaatggaat gccttaaaaa aataaaatcc ttaaagaata 660
ggttcaaaaa ataaagttca aaatantngc ccaaaaataa attaacnngg taatattaac 720
tacataaggg taaaacaa 738

<210> 303
<211> 635
<212> DNA
<213> Homo Sapiens

<400> 303
gaacggccga gggtaacatc ccgggctcgc gggaggctgt cggggtaatg gccacacgct 60
gacagaacca gccgagtgga aaaggggagc gaagccgttc ctctgcaccc ttccccaggc 120
ctgaggcctt cccgcttggt gctgccgccg ccactgccgg ctgaggaggg gcgatgagtt 180
ggttcaacgc ctcccagctc tccagcttcg ctaagcaggc cctgtcccag gcccagaagt 240
ctattgacag ggttctggac atccaggaag aggagccgag catctgggcc gagaccattc 300
cgtatggaga gccgggaata agttcccctg tcagtggagg atgggatact tcaacctggg 360
ggttgaaatc aaacactgaa cctcagagtc caccaatagc ctctcctaaa gcaatcacaa 420
agccagttcn gaggactgtg gtcgatgaat ctgaaaattt cttcagtgcc tttctctcgc 480
caactgatgt ccagaccatt cagaagagtc cagtggtatc aaaacctcca ncataatcac 540
aacnaccang nagaangaan tgaaaancan cttacatgaa tccttgcaca ttggncaant 600
caagaaactt cctgaaacaa ctgaaatcac aaagt 635

<210> 304
<211> 847
<212> DNA
<213> Homo Sapiens

<400> 304
gagacggagt ctttctctgt cacccatgct ggagtgcagt ggcacaatct tggctcattg 60
taacctccac ctcccaggtt caagcaatgc tcctgcctca gcctcccgag tagctaggat 120
tacaggcgca caccaccacg ccaggctaat ttttgtattt ttagtagaga tggggtttca 180
ccaaactgct ggccatgctg gtcttgaact cctgacatca ggtgatatgc ccgccttggc 240
ctcccaaagt gctgggatta caggcatgag ccacagcacc tggccgtaaa tgagagtttt 300
tatgtgcaag taaaggcagt taaataactt tcagtaataa aatgcatcac aatatttcac 360
aggtttaaaa cacaacctgg ttacctttt gaataaaata acatttggaa gaaggcatag 420
ctacttttaa aagctattct atgctttcct tgtgtttgaa atttcaagaa aaaataaaat 480
gataaatcac aaaattaaaa atgccaaatt caagttaatt cctataattc ttccattttg 540
ttatgaatat tctgtaatat caaacattca tttttaatgt gctaaaaata tgggtttaca 600
aaatatgaac aggtaatttt taaaagagta aattatgtta aagaacttta ataantttcg 660
attcatttta tagggtanta aaataatact tcttcaaaat caattaaatg ttattgaatg 720
ccatttgcaa aatcattata aataaatttt cncaattatc caatcacaat tctagataac 780
attgaataag tncaaggttt ccccgggata ngttccaaaa nggtnccaca attttatnca 840
gacctaa 847

<210> 305
<211> 767
<212> DNA
<213> Homo Sapiens

<400> 305
cccccttcgt ctcagctgtg cgggaacggc cgagggtaac atcccgggct cgcgggaggc 60

tgtcggggta atggccacac gctgacagaa ccagccgagt ggaaaagggg agcgaagccg 120
ttcctctgca cccttcccca ggcctgaggc cttcccgctt ggtgctgccg ccgccactgc 180
cggctgagga ggggcgatga gttggttcaa cgcctcccag ctctccagct tcgctaagca 240
ggccctgtcc caggcccaga agtctattga cagggttctg gacatccagg aagaggagcc 300
gagcatctgg gccgagacca ttccgtatgg agagccggga ataagttccc ctgtcagtgg 360
aggatgggat acttcaacct gggggttgaa atcaaacact gaacctcaga gtccaccaat 420
agcctctcct aaagcaatca caaagccagt tcggaggact gtggtcgatg aatctgaaaa 480
tttcttcagt gcctttctct cgccaactga tgtccagacc attcagaaga gtccagtggt 540
atcaaaacct ccaacaaaat cacaacgacc aagaaagaag aagtgaaaag caacttacat 600
gaatcccttg cacattggcc aatcaagaac tcctgaaaca actgaatcac aagtaaaaag 660
actccctcct tgtgtgtttc aaggggaaaa ctctgggcaa caaggtactt catcacctaa 720
aactgaaagg naaacaacga agaaaactgt ttaatnaaag aatccgg 767

<210> 306
<211> 1659
<212> DNA
<213> Homo Sapiens

<400> 306
ccccccttcgt ctcagctgtg cgggaacggc cgagggtaac atcccgggct cgcgggaggc 60
tgtcggggta atggccacac gctgacagaa ccagccgagt ggaaaagggg agcgaagccg 120
ttcctctgca cccttcccca ggcctgaggc cttcccgctt ggtgctgccg ccgccactgc 180
cggctgagga ggggcgatga gttggttcaa cgcctcccag ctctccagct tcgctaagca 240
ggccctgtcc caggcccaga agtctattga cagggttctg gacatccagg aagaggagcc 300
gagcatctgg gccgagacca ttccgtatgg agagccggga ataagttccc ctgtcagtgg 360
aggatgggat acttcaacct gggggttgaa atcaaacact gaacctcaga gtccaccaat 420
agcctctcct aaagcaatca caaagccagt tcggaggact gtggtcgatg aatctgaaaa 480
tttcttcagt gcctttctct cgccaactga tgtccagacc attcagaaga gtccagtggt 540
atcaaaacct ccaacaaaat cacaacgacc aagaaagaag aagtgaaaag caacttacat 600
gaatcccttg cacattggcc aatcaagaac tcctgaaaca actgaatcac aagtaaaaag 660
actccctcct tgtgtgtttc aaggggaaaa ctctgggcaa caaggtactt catcacctaa 720
aactgaaagg naaacaacga agaaaactgt ttaataaaga atcggatatg aaggtgccaa 780
ctgtaagttt gaaagtatct gaaagtgtaa ttgatgtgaa aacaactatg gaaagtatat 840
ctaatacgtc tacgcagtct ctcacagcag aaacaaagga catagctttg gaacctaagg 900
aacaaaaaca tgaagacagg cagagcaata caccttctcc tcctgttagt acctttttcat 960
caggtacttc taccaccagt gatattgaag ttttagatca tgaaagtgta ataagtgaga 1020
gctcagcgag ctcgagacaa gagactacag attcaaaatc aagtcttcac ttgatgcaga 1080
catcttttca gcttctctct gcatctgctt gtcctgaata taatcgttta gatgatttcc 1140
aaaaactcac tgagagttgc tgttcatctg atgcttttga aagaatagac tcatttagtg 1200
tacagtcatt agatagccgg agtgtaagtg aaatcaattc agatgatgaa ttgtcaggca 1260
agggatatgc tttagtgcct attatagtta attcttcaac tccaaagtct aaaacagttg 1320
aatctgctga aggaaaatct gaagaagtaa atgaaacatt agttataccc actgaggaag 1380
cagaaatgga agaaagtgga cgaagtgcaa ctcctgttaa ctgtgaacag cctgatatct 1440
tggtttcttc tacaccaata aatgaaggac agactgtgtt agacaaggtg gctgancagt 1500
gtgaacctgc tgaaagtcag ccanaancac tttctgacaa ggaanatgtt tgcaatacag 1560
ttgaatttct gaatgaaaaa gcnggaaaaa agggangctc agttattatc tcttagtaag 1620
gaaaaagcac ttctaggaag aagctttttg atacctgaa 1659

<210> 307
<211> 831
<212> DNA
<213> Homo Sapiens

<400> 307
ctaagcattc catattggaa gaagagattt ctacacatga aaaaaatgcc tttgtttagt 60

aaatcacaca aaaatccagc agaaattgtg aaaatcctga aagacaattt ggccattttg 120
gaaaagcaag acaaaaagac agacaaggct tcagaagaag tgtctaaatc actgcaagca 180
atgaaagaaa ttctgtgtgg tacaaacgag aaagaacccc caacagaagc agtggctcag 240
ctagcacaag aactctacag cagtggcctg ctagtgacac tgatagctga cctgcagctg 300
atagactttg agggaaaaaa agatgtgacc cagatattta acaacatctt gagaagacag 360
ataggcactc ggagtcctac tgtggagtat attagtgctc atcctcatat cctgtttatg 420
ctcctcaaag gatatgaagc cccacagatt gccttacgtt gtgggattat gctgagagaa 480
tgtattcgac atgaaccact tgccaaaatc atcctctttt ctaatcaatt cagagatttc 540
tttaagtacg tggagttgtc aacatttgat attgcttcag atgcctttgc tactttcaag 600
ggatttacta accagacata aagtgttggt agcaagactt cttagaacaa aattacgaca 660
ctantttga agactatgag aaattgcttc agtctgagaa attatgttac caagagacag 720
tccttaaagc ctgctaaggg aactgattct ggaccgtcan aactttgcca tcaangcaaa 780
agtttatcaa caagccnggg gaaaccggaa acncaaggag gaacctcctt c 831

<210> 308
<211> 833
<212> DNA
<213> Homo Sapiens

<400> 308
ccattcaaat gtttatactc catctaccca gaacaattac agcagaaaaa ataggcacct 60
ccaaagtctt cccaagaatg atgactttct gaaatgacac actgtacaaa ctggacaaat 120
gagacgactg actgtgacag gggccgggga gctcttcaag gggccgtttt cttcaagtct 180
cggatctgtt taatcaagta gttcttctcg tcagcgaact gctcatcatc cgtcctttct 240
ttttggaagc tgctcagaaa ctcaatgagt ttgggctgat tttttaacag gatctccaca 300
ataggctgtg ttttgtgagg actggccaca aacaccttaa aaacatgaaa ggcttcaaac 360
tggatgttgg gacttttatc ccgaaggagg ttcatcatga gtttcaggtt ctccggcttg 420
ctgatatact ttgtcatgat ggcaaagttg tgacggtcca ggatcagctc ccctagcagc 480
tttaaagact gtctcttagt aacataattc tcagactgaa gcaatttctc atagtcttca 540
aaaatagtgt cgtaattttg ttctaagaag tctgctacca acactttaag gtcnggttag 600
taaatccttg aaagtagcaa aggcatctga agcaatatca aatgttgaca actccacgtt 660
acttaaagaa atctctgaat tgattagaaa aagaggatga ntttgggcaa ntgggtcaag 720
tcgaatanat tcctctcaag cataaaccca caaacgttaa ggnaaaccgg tgggggcttc 780
aaaanccntt gagggagcat aaancangga tattagggat nagcacccaa ata 833

<210> 309
<211> 1320
<212> DNA
<213> Homo Sapiens

<400> 309
gcatcaccac catccacgag gatgaggtgg ccaagaccca gaaggcagag ggaggtggcc 60
gcctgcaggc tctgcgttcc ctgtctggca ccccaaagtc catgacctcc ctatccccac 120
gttcctctct ctcctccccc tccccaccct gttcccctct catggctgac cccctcctgg 180
ctggtgatgc cttcctcaac tccttggagt ttgaagaccc ggagctgagt gccactcttt 240
gtgaactgag ccttggtaac agcgcccagg aaagataccg gctggaggaa ccaggaacgg 300
agggcaagca gctgggccaa gctgtgaata cggcccaggg gtgtggcctg aaagtggcct 360
gtgtctcagc cgccgtatcg gacgagtcag tggctggaga cagtggtgtg tacgaggctt 420
ccgtgcagag actgggtgct tcagaagctg ctgcatttga cagtgacgaa tcggaagcag 480
tgggtgcgac ccgaattcag attgccctga agtatgatga gaagaataag caatttgcaa 540
tattaatcat ccagctgagt aacctttctg ctctgttgca gcaacaagac cagaaagtga 600
atatccgcgt ggctgtcctt ccttgctctg aaagcacaac ctgcctgttc cggacccggc 660
ctctggacgc ctcaagacac tctagtgttc aatgaggtgt tctgggtatc catgtcctat 720
ccaagccctt caccaagaag accttaagag tcgatgtctg taccaccgac aggagccatc 780
tgggaaaagt gcctgggagg cgcccaaatn agcctggcgg aggtctgccg gtctgggggа 840

aaagtcgact cgcttggtac aactttctca gntacaaaat acttgaagaa acagagcagg 900
gagctcaagc cagtgggagt catggccctt gcttcagggc ntgccagcac ggacgctgtg 960
tcttgctctg ttggaacaga cagcagtgga gttggagaag aggcaggagg gcaggagcag 1020
cacacagaca ctggaagaca gctggtgagt gagcccgccc ttgggcccca ggagctgccc 1080
tgcctggacc taggcccagc aatgagatcc cccaatgcca gtgcaactaa gagaagggtt 1140
ccactgggaa ggctgagaac ccctctcctc atgggttctc tacaggcaaa aaggcaatgt 1200
aacctagtac gatggttccc agaattcctt tcgaatttgc catttcgttt cccatgaatc 1260
acctatgcta gttcacacct aatgttattc tttatcttga tatagtgaca tttattttgc 1320

<210> 310
<211> 1030
<212> DNA
<213> Homo Sapiens

<400> 310
aacatttctg tgatcaacat tgcttactgc gtttctactg tcaacaaaat gagcccaaca 60
tgacaactca gaaaggacct gaaaacttac attatgatca gggttgtcag acatctcgaa 120
ccaaaatgac aggttcagca ccacccccct ctccaacacc taacaaagag atgaagaaca 180
aagcagttct ttgcaaacct ttaacaatga caaaagctac ttactgtaaa cctcacatgc 240
agaccaaatc ttgtcagaca gatgatactt ggaggacaga atatgttcca gtgcctatcc 300
ctgtgcctgt gtatatccca gttcctatgc acatgtacag tcagaatatt cctgttccta 360
ctacagttcc tgttcctgtg ccagttcctg tttttctgcc tgctccattg gacagcagtg 420
agaagattcc tgcagcaatt gaggagctaa aaagcaaggt ttcttcagat gctcttgata 480
cagagttgct tacaatgacg gatatgatga gtgaagacga ggggaaaaca gagacaacca 540
acatcaacag tgtaattatt gaaacagata taattggttc agacctttg aagaactctg 600
acccagagac acagtccagc atgcctgatg taccatatga accaagattt ggatatcgaa 660
atagattttc ccagagctgc tgaggagctt gatatggaaa atgaattttt attaccacct 720
gtttttggcg aagaatatga ggaacagccc aagacctcga tctaaaaaaa aagggagcca 780
agagaaangc tgtatcaagg ataccaagtc tcatgatgat aagtctgaca atttcagaat 840
gcagcnttcc tttcaaatta tacgtatggg cgtaaatgca tgggnaacac cgggtcaaaa 900
actaagnnac ttggatgaaa gatcntccgg gnaattagaa tgagttaaaa tccttccaaa 960
tccantnaag tttaaaagag ggtntaatcc cctcaaaacc anagctggng ccttaacaag 1020
ggggttaacc 1030

<210> 311
<211> 546
<212> DNA
<213> Homo Sapiens

<400> 311
gtttctgttt tcagaagaat tgggaaaact tctgtgaaag aagaatgcag aaacaaagaa 60
atatgaagtc ttgggagtat actgattaaa aagcacacat tgggagtgat agtaagaaga 120
gctaaaataa aaagcacaga aggaaaaaat aattgatttg tacataagct aaattataat 180
tcctttaaaa ttgtttataa caagatggaa tacagaatga cgattagatt tataacgtgt 240
gtttatatga atatgttgtt aacagtgaga tttctgatat ggtataacaa agtatatgat 300
tggaggacct gcaaaatgta tactcgggtt gtttttcttt ttaaaaatat tgtnaaacag 360
gcaagtgagg cttaacagca ttatggttca ttacngggtt tgggntatat accttttca 420
gcttctgtna tgagcaagtt gtgttttcaa tccccacttt caatgtctat gggaagggcg 480
cnttttgctn tgttttgttt tgtctttaaa ncnttttnaa acngggaca canatggang 540
ccggcc 546

<210> 312
<211> 518
<212> DNA
<213> Homo Sapiens

<400> 312
aaaattatta ntntaaaagg ggaaataggt nggattnccn tnttnagggc aataattntg 60
gggaggaatg gggtggggct naccccctgna acccatnata aacctattct nctnagggtg 120
ctgggaaana attggggtct ggaataaanc tncaaatggg tcnccngctt cactaaaacc 180
ttggcaacta aggctcattt ttccaaaggg gttnctnang tcnnctccct ntnaaatcnt 240
tttattatnc cagggtggct gttgctaang cttnggtggg aaancangaa nttnctgctn 300
ctnctgctgc tgttgctgct gggcantnca agggaaaacc cccccgacaa actgggataa 360
ngtgacctgn ttgcncacnt ctngggccct attnccntac ctgncctgna aatncttccc 420
nctctgcccc ctttactnnt gccaannctt tccccccccgg ttaggataaa aattcccctn 480
aacctccnac ctttggttan cgggggtccc ctnccccc 518

<210> 313
<211> 660
<212> DNA
<213> Homo Sapiens

<400> 313
gccaagctgt gaatacggcc caggggtgtg gcctgaaagt ggcctgtgtc tcagccgccg 60
tatcggacga gtcagtggct ggagacagtg gtgtgtacga ggcttccgtg cagagactgg 120
gtgcttcaga agctgctgca tttgacagtg acgaatcgga agcagtgggt gcgacccgaa 180
ttcagattgc cctgaagtat gatgagaaga ataagcaatt tgcaatatta atcatccagc 240
tgagtaacct ttctgctctg ttgcagcaac aagaccagaa agtgaatatc cgcgtggctg 300
tccttccttg ctctgaaagc acaacctgcc tgttccggac ccggcctctg gacgcctcaa 360
gacactctag tgttcaatga ggtgttctgg gtatccatgt cctatccaag cccttcacca 420
agaagacctt aagagtcgat gtctgtacca ccgacaggag ccatctggga aaagtgcctg 480
ggaggcgccc aaatnagcct ggcggaggtc tgccggtctg ggggaaaagt cgactcgctn 540
gtacaacctt ctcagctaca aatacttgaa gaaacaagac aangggactc aagccantgg 600
gagtcatggg ccctggcctc angggctgcc aacaacgggc cccgtgttct ggccccgttt 660

<210> 314
<211> 516
<212> DNA
<213> Homo Sapiens

<400> 314
gaaaggccac tttattgatg gagataaaac tgaatggagt tccccacagc cctcccctca 60
ctcatgttag tggcttnact gggcatctga gaccagcgtg gcctgtcacc cacatanact 120
aggctgctta gcccacccag cctatcacac tgcccgctcc acgttgggca gccacataaa 180
aacacgtcac agctcaanaa natccgtgga tgcacctctg aatccccccc aatggtttct 240
gtgcattttt ttaatattgt acaaaatatg ttaactagga aaaattagct gtactgtgac 300
aagtgcggga cgtcctatta ggattaccgt cccccaggca ttacttctta ttgcagtaag 360
acctctaaaa ggtggagctg tncaaaccaa aaaaaatcta aacgatttta agaanagcag 420
caactcaata ctgctttagt tcatttaaat tttctttccc aaaaatacac tcctaaatat 480
acaaactata caatcttatt attttaatgc tggttt 516

<210> 315
<211> 677
<212> DNA
<213> Homo Sapiens

<400> 315
tcagaatggc agattcagga gagagtttgt gccagaatag cattgaagaa cttgatggtg 60
tccttacatc catattcaaa catgagatac catattatga gttccagtct cttcaaactg 120
aaatttgttc tcaaaacaaa tatactcatt tcaaagaact tccaactctt ctccactgtg 180
cagcaaaatt tggcttaaag aacctggcta ttcatttgct tcaatgttca ggagcaacct 240

gggcatctaa gatgaaaaat atggagggtt cagaccccac acatattgct gaaaggcatg 300
gtcacaaaga actcaagaaa atcttcgaag acttttcaat ccaagaaatt gacataaata 360
atgagcaaga aaatgattat gaagaggata ttgcctcatt ttccacatat attccttcca 420
cacagaaccc agcatttcat catgaaagca ggaagacata cgggcaagag tgcaaatgga 480
gctgaggcaa atgaaatgga aggggaaggn aaacagaatg ggntcaggca tggagaccaa 540
acacagccca ctaagaggtt ggcagtgaga gttctgaaag accagtatga tgacttgtan 600
gtgttcaatc cctgggngct gattcaagaa aaataattcc acaagggtgc tattcntngt 660
ttttacaaga cntcctt 677

<210> 316
<211> 843
<212> DNA
<213> Homo Sapiens

<400> 316
agctttaaac attcaattta tttgtggcat ttgtacatga aaattatatg acgataacat 60
tgctttctat tctaagctag taaattgttt ctaagaaata atagattgat aaaattgcaa 120
gtcttaatac aaaggtaggt tatgaaaatg tatattaatt tgagatatag aaaagttttc 180
aaataataat gttttcaggg ttatatgcaa atagacacta aataagacaa ggtttctgca 240
aacatgatgt aacaataatg actggaactc tgaatgtgag aaattcagaa aatgaaccag 300
ctacttaaaa agcaaaaatg tgctaagtaa atttgtattt tcatggttat tctaaggaga 360
ggaggaataa tctgttgagg ttagtgccct caagcagacc ccataacttt gctacaccgc 420
atttaacttc tctgtgctgt tttcttttaa ttttcaaaat ggaaattagc tgtttcattg 480
gtgaagtgca ttgtaaaatg agagaatttt caaataatgc aattactcta tggtattctg 540
ttttaatagt aatataccca tatgaagcag gtataatgag aataaatttt gccaataaca 600
aattctgaaa tctgaanttt gtttctgctg tcatagtatg aattcgcttt aaagananca 660
ggcaatccaa attcaacttg ctcacctgaa aacaaaatgt ccgtanatcg tgagttcata 720
taataacctc cttaatgatc ttcctgcaca naaaccaaat tcttttcaac ttggggtcaa 780
caagaaccta ttgctgaatt ttcatataaa actatttcct gttggcagtt tcctaccccc 840
gga 843

<210> 317
<211> 835
<212> DNA
<213> Homo Sapiens

<400> 317
acaagacacg cctgcgtagt ggtagtgccc tcctgcagtc ccagtctagt actgaggacc 60
cgaaggatga gcctgcggag ctaaaaccag attctgagga cttatcctcc cagtcctcag 120
cttcaaaggc atctcaggag gatgccaatg aaatcaagtc taaacgggat gaagaagaac 180
gagaacgaga aaggagggag aaggagaggg aacgagaaag agaacgggag aaggagaagg 240
agagagaacg agagaagcag aagctaaaag agtcagaaaa agagagagat tctgctaagg 300
ataaagagaa aggcaaacat gatgatggac ggaaaaagga agcagaaatt atcaaacaat 360
tgaagattga actcaagaag gcacaggaga gccaaaagga gatgaaacta ttgctggata 420
tgtaccgttc tgccccaaag gaacagagag acaaagttca gctgatggca gctgagaaga 480
agtctaaggc agagttggaa gatctaaggc aaagactcaa ggatctggaa gataaagaga 540
agaaagagaa caaagaaaat ggctgatgaa ggatgccttg aggaagatcc gggcagtgga 600
gggacaagat agaataccta cagaagaagc taagccatgg gcaagcagga agaagaagca 660
ctcctctctg aaatgggatg tcacaaggcc aagcctttga agacatgcag gagcaaaaat 720
atccgntttg attgcagcaa nttgccggga anaanggatg atgccaaatt ttcaaagccc 780
aatgtcaaaa gccgttttca agttccaaat ccagnttcat naagnttgcc ttaaa 835

<210> 318
<211> 582
<212> DNA

<213> Homo Sapiens

<400> 318

caaactgaat cctgctttaa ttcaagcttg nggagaacaa agtcctacag aaacattcca 60
nanaattttc nggaaaagag ggatcacaac aaccctgtaa aaaggagact ganagtaatt 120
canagctcac caagttcncn ccgtatcaaa tttccanaat acccacaaga tttcttcacc 180
anctcantcc tgactcaacc tcttcaatct ttanttcatt agaagacaaa gggtcanatt 240
atttaaaatt antcnantcc caagaaattt aaagacttga agtagtagag cattcaaaac 300
ttaaataact ttaacaagaa agccanctga tcttaacaag ttacncngcn antaaatggg 360
aaatagactg aatcanccta nacataattt cattagggnt gcaaaccacc cangggaaag 420
tagcacaatt ataccanttt gtaatccaca ttcacaagaa gtttgcnaca caaatgaaga 480
aaactttgng cccatagaca acttatttttt taaaatatca ctccccaaaa gtagccatgt 540
ttccactttt ggtccccttt ccanatcaaa aataccaact tg 582

<210> 319
<211> 827
<212> DNA
<213> Homo Sapiens

<400> 319

gaagccattc gatgttcatc agattggcca tttcagccat accttgtgtt tgatgttgga 60
gatggttcag aaagacggga taatgactca tatataaatg ttcaagaaat aaaactggtg 120
atggaaataa ttaagcttat taaagacaaa agaaaggatg ttagttttcg aaacattggc 180
ataataactc attacaaggc ccagaagacg atgattcaga aggatttgga caaagagttc 240
gatagaaaag gaccagcaga agtagacact gtggatgcat tccagggtcg gcagaaggat 300
tgtgttattg ttacgtgtgt cagagcaaat agcatccaag gttcaattgg attcctggca 360
agtttgcaga gattgaatgt caccatcaca cgagccaagt acagcctctt catcctcgga 420
catttgagga ccctgatgga aaaccagcat tggaatcagc tgattcagga tgctcagaag 480
cgtggtgcca ttattaagac ctgtgacaaa aactatagac atgatgcagt gaagattctg 540
aaactcaagc ctgtgctgca gagaagtctc actcancctc ctaccatagc cccaaagggg 600
tccaaacccc aagggtggnt tgcccaagca ncaagctaga cagttggatt ttgccaaaga 660
caatcctggt tgccggcttc tccaatacca aaacaaccct ccggactccc aagggaaaat 720
tacncctaac ggtttacctt caaagggacc ctgaaaagac ccncctggtt caatgaccaa 780
cnttcanggg ncccacgaan tggctgaaaa agggatgggc aatttag 827

<210> 320
<211> 598
<212> DNA
<213> Homo Sapiens

<400> 320

aaattttaaa aggattttgt tatttgctat acaaatatac atttcaactt ttacaacatt 60
cactccagtc tgacctcctt gtctatagaa gactaagaga tcaacatttc cagtctctga 120
cttcaaggac attattacgg atacacaatg ccctctgaaa gcttttgcaa atgacagaaa 180
atactgaaga tgaccagagg ctcaggtgtt aaggatgcat tttccatgtt ttccaacagc 240
acacaaactc cttacaaaaa acaagcttat ctagatggtc ccacgagctg gtcatcttca 300
gtttacaata tgctgtggct gctggcccat gtcactgggc tttcctataa aagctttctt 360
ttcttgggaa ctgctgtcct cctgctccaa gtgtcctctt gtcccaccta gagttcctcc 420
tggtgtgatg ggtctcggaa ccacacttct cctgctcccc ttcactgaaa gccctggcct 480
ctctcctgtg acagagctcc tcttccgggt catcacattt gctctgacac gtgggnagcc 540
tcggggaact gggcanctgg gaggntccgt ttttttttgg gaaggtttgt tggctgcc 598

<210> 321
<211> 808
<212> DNA

<213> Homo Sapiens

<400> 321

gcatcaccac catccacgag gatgaggtgg ccaagaccca gaaggcagag ggaggtggcc 60
gcctgcaggc tctgcgttcc ctgtctggca ccccaaagtc catgacctcc ctatccccac 120
gttcctctct ctcctccccc tccccaccct gttcccctct catggctgac cccctcctgg 180
ctggtgatgc cttcctcaac tccttggagt ttgaagaccc ggagctgagt gccactcttt 240
gtgaactgag ccttggtaac agcgcccagg aaagataccg gctggaggaa ccaggaacgg 300
agggcaagca gctgggccaa gctgtgaata cggcccaggg gtgtggcctg aaagtggcct 360
gtgtctcagc cgccgtatcg gacgagtcag tggctggaga cagtggtgtg tacgaggctt 420
ccgtgcagag actgggtgct tcagaagctg ctgcatttga cagtgacgaa tcggaagcag 480
tgggtgcgac ccgaattcag attgccctga agtatgatga gaagaataag caatttgcaa 540
tattaatcat ccagctgagt aacctttctg ctctgttgca ncaacaaaga ccagaaagtg 600
aatatccgcg tggctgtcct tccttgctct gaaaagcaca aactgcctgt tccgggaccc 660
gggctctgga cgcctcaaac actccaagtg ttcaatgaag gtgttctggg tatccatggt 720
ccctatccaa acccnttaac aagaaagacc tttaaanaag tccaatgtcc ngtnaccaac 780
cggacaaggg agccaatctt gggaaaaa 808

<210> 322
<211> 629
<212> DNA
<213> Homo Sapiens

<400> 322

agcaaaataa atgtcactat atcaagataa agaataacat taggtgtgaa ctagcatagg 60
tgattcatgg gaaacgaaat ggcaaattcg aaaggaattc tgggaaccat cgtactaggt 120
tacattgcct ttttgcctgt agagaaccca tgaggagagg ggttctcagc cttcccagtg 180
gaacccttct cttagttgca ctggcattgg gggatctcat tgctgggcct aggtccaggc 240
agggcagctc ctggggccca agggcgggct cactcaccag ctgtcttcca gtgtctgtgt 300
gctgctcctg ccctcctgcc tctttctccaa ctccactgct gtctgttcca acagagcaag 360
acacagcgtc cgtgctggca ngccctgaag caagggccat gactcccact ggcttgagct 420
ccctgctctg tttcttcaag tattttgtan ctgagaaagt tgtaccaanc gaatcnacct 480
ctccccaaga ccgggaagac ctcccgccaa ggctgatttg gggcgcctcc caagcactct 540
tccaaaatgg ctcccgtccg ttgggacana catccnactt tttaangcct tccggggnaa 600
agggctgggn taaggacatt gggtncccc 629

<210> 323
<211> 798
<212> DNA
<213> Homo Sapiens

<400> 323

aacatttctg tgatcaacat tgcttactgc gtttctactg tcaacaaaat gagcccaaca 60
tgacaactca gaaaggacct gaaaacttac attatgatca gggttgtcag acatctcgaa 120
ccaaaatgac aggttcagca ccacccccct ctccaacacc taacaaagag atgaagaaca 180
aagcagttct ttgcaaacct ttaacaatga caaaagctac ttactgtaaa cctcacatgc 240
agaccaaatc ttgtcagaca gatgatactt ggaggacaga atatgttcca gtgcctatcc 300
ctgtgcctgt gtatatccca gttcctatgc acatgtacag tcagaatatt cctgttccta 360
ctacagttcc tgttcctgtg ccagttcctg tttttctgcc tgctccattg gacagcagtg 420
agaagattcc tgcagcaatt gaggagctaa aaagcaaggt ttcttcagat gctcttgata 480
cagagttgct tacaatgacg gatatgatga gtgaagacga ggggaaaaca gagacaacca 540
acatcaacag tgtaattatt gaaacagata taattggttc agacctttg aagaactctg 600
acccagagac acagtccagc atgcctgatg taccatatga accagatttg gatatcgaan 660
tagattttcc cagagctgct gaaggagcct tgatatggga aaatgaattt ttattaccaa 720
ccngtttttg ggcgaaagaa tatgaaggaa caagcccaaa cctcgattct aaaaaaaagg 780

ggagccaagg agaaaagg 798

<210> 324
<211> 754
<212> DNA
<213> Homo Sapiens

<400> 324
aaaaggacac taaggtttta ataaggggaa caaaaaattg ttttcaccag catagattca 60
cattacagta caccaatatt gacagcattc tcttgtctat ttttggtaca gaagatggta 120
tctctctaca taaccttgta aggcttcagt aactaaaatg taaaaccaaa caaaacaaaa 180
ccccaaaaca aaacaaaaac cccagcctat tagtttacag tttattttaa aaattccgaa 240
agacactgca agttctaaac ttttagtagt gctacccata cacaaccatc tggttaagaa 300
cccagtaaaa gagccccctt ccaaggaagc tttgcaacag tagagttgtg caatatggat 360
gtttcttact acaagaaaaa aattatacat ggcacattct cattcatatt ctgtaatgta 420
aaaagttaca aacataccta atcaaataaa taataataaa aaaagaattt gaatgtattt 480
gttaagtatc ctaaaaccac tacatagaat aatggcaact ttcactcaca gattatttac 540
atggtaatac ccagcgtggg tacactgcta caaaactcaa aacagaagga gtaaacttga 600
aatgttttcc ataataaaga tctagcanca tgactatcct aatgccgttt tatcccgaat 660
gcttctggca acgttccctt ttaatccggt gtctcatcca attcaaaaan tggcctttac 720
caaaaaatat ccttttacaa gaaagaaacc cgtt 754

<210> 325
<211> 854
<212> DNA
<213> Homo Sapiens

<400> 325
ggtcaggggt gagagctgga atctctgcac gggccttgga aaacgactgt cttcttctgc 60
caaaatgtca ggaattggaa ataaaagagc agctggagaa cctggcacct ccatgcctcc 120
tgagaagaag gcagctgttg aagattcagg gaccacagtg gaaacaatta agctaggagg 180
tgtctcttca acggaggaac tagacattag aacactgcaa accaaaaatc gcaagctggc 240
agaaatgttg gatcagcggc aggccattga agatgaactt cgtgagcaca ttgaaaaact 300
ggaacgacga caggccactg atgatgcctc actattgatt gtcaaccgat actggagtca 360
gtttgatgaa aacatccgta tcatccttaa acgttatgat ctggagcagg gcttgggaga 420
cctactcaca gaacgaaaag cccttgttgt gcctgaacca gaaccagact ctgatagcaa 480
tcaggagcgt aaagatgacc gagagagagc agttccagtg aagagatgga gtctcagctg 540
caggaacgtg tggagtcttc ccgccgagcc gtgtcccaga ttgtgactgt ttatgataaa 600
ttgcaagaaa aagtggagct cttatcccgg gaagctaaac agtgggagat aatctgatag 660
tggagggaag canttgcaag gagctgaact ctttcctcgc acaaggagaa tattaaggct 720
acanggaatt gacaagatct tcctcaggaa aaagcatcgc aaccatggtc tcaaggngtt 780
cctccaaagt tgcaagaggt aaaattgggg naaaagccga attcaccaan tttccggtcc 840
tggaagtcca anga 854

<210> 326
<211> 760
<212> DNA
<213> Homo Sapiens

<400> 326
caaactgaat cctgctttaa ttcaagcttg tggagaacaa agtcctacag aaacattcca 60
cagaattttc tggaaaagag ggatcacaac aaccctgtaa aaaggagact gagagtaatt 120
catagctcac caagttctct ccgtatcaaa tttccagaat acccacaaga tttcttcacc 180
agctcagtcc tgactcaacc tcttcaatct ttatttcatt agaagacaaa gggtcatatt 240
atttaaaatt attctagtct caagaaattt aaagacttga agtagtagag cattcaaaac 300

ttaaataact ttaacaagaa agccagctga tcttaacaag ttactctgct agtaaatggg 360
aaatagactg aatcatccta gacataattt cattagggct gcaaaccacc caggggagag 420
tagcacaatt ataccatttt gtaatccaca ttcacaagaa gtttgctaca caaatgaaga 480
aaactttgtg cccatagaca acttattttt taaaatatca ctccccaaaa gtagccatgt 540
ttccactttt gttccctttt ccacatcaaa aataccaact tgatttcttc aggaggaatg 600
gacaatccaa gtttatacaa gtgggctggg aaaaagaaaa cactgaaaag tctaaaagca 660
caagataaac aaagcctggg aagggaagac agttaagagt tatttgtttc caantcaatc 720
cnaaaaccca anggcttgta attaacaagt cctttccggc 760

<210> 327
<211> 852
<212> DNA
<213> Homo Sapiens

<400> 327
caaagcagtt ctttgcaaac ctttaacaat gacaaaagct acttactgta aacctcacat 60
gcagaccaaa tcttgtcaga cagatgatac ttggaggaca gaatatgttc cagtgcctat 120
ccctgtgcct gtgtatatcc cagttcctat gcacatgtac agtcagaata ttcctgttcc 180
tactacagtt cctgttcctg tgccagttcc tgtttttctg cctgctccat tggacagcag 240
tgagaagatt cctgcagcaa ttgaggagct aaaaagcaag gtttcttcag atgctcttga 300
tacagagttg cttacaatga cggatatgat gagtgaagac gaggggaaaa cagagacaac 360
caacatcaac agtgtaatta ttgaaacaga tataattggt tcagaccttt tgaagaactc 420
tgacccagag acacagtcca gcatgcctga tgtaccatat gaaccaagat ttggatatcg 480
aaatagattt tcccagagct gctgaggagc ttgatatgga aaatgaattt ttattaccac 540
ctgtttttgg cgaagaatat gaggaacagc ccaagacctc gatctaaaaa aaaagggagc 600
caagagaaan gctgtatcaa ggataccaag tctcatgatg ataagtctga caatttcaga 660
atgcagcntt cctttcaaat tatacgtatg ggcgtaaatg catgggnaac accgggtcaa 720
aaactaagnn acttggatga aagatcntcc gggnaattag aatgagttaa aatccttcca 780
aatccantna agtttaaaag agggtntaat cccctcaaaa ccanagctgg ngccttaaca 840
agggggttaa cc 852

<210> 328
<211> 799
<212> DNA
<213> Homo Sapiens

<400> 328
aaaaggacac taaggtttta ataaggggaa caaaaaattg ttttcaccag catagattca 60
cattacagta caccaatatt gacagcattc tcttgtctat ttttggtaca gaagatggta 120
tctctctaca taaccttgta aggcttcagt aactaaaatg taaaaccaaa caaaacaaaa 180
ccccaaaaca aaacaaaaac cccagcctat tagtttacag tttattttaa aaattccgaa 240
agacactgca agttctaaac ttttagtagt gctacccata cacaaccatc tggttaagaa 300
cccagtaaaa gagccccctt ccaaggaagc tttgcaacag tagagttgtg caatatggat 360
gtttcttact acaagaaaaa aattatacat ggcacattct cattcatatt ctgtaatgta 420
aaaagttaca aacataccta atcaaataaa taataataaa aaaagaattt gaatgtattt 480
gttaagtatc ctaaaaccac tacatagaat aatggcaact ttcactcaca gattatttac 540
atggtaatac ccagcgtggg tacactgcta caaaactcaa aacagaanga gtaaacttga 600
aatgttttcc ataataaaga tctagcaaca tgactatcca atgctgtttt atcccgattg 660
cttctgcaac gttcctttta atccgtgtct catccagttc anaantgtcc ttatcaanaa 720
taacctttac tagaagaaac cgtncaagca tattttcaan gggtttccgg tccaattgaa 780
gttanacgtn taccaaaca 799

<210> 329
<211> 978
<212> DNA

<213> Homo Sapiens

<400> 329

ggaagatggc ggcggccgtt ccacagcggg cgtggaccgt ggagcagctg cgcagtgagc 60
agctgcccaa gaaggacatt atcaagtttc tgcaggaaca cggttcanat tcgtttcttg 120
cagaacataa attattagga aacattaaaa atgtggccaa gacagctaac aaggaccact 180
tggttacagc ctataaccat ctttttgaaa actaagcgtt ttaagggtac tgaaagtata 240
agtaaagtgt ctgagcaagt aaaaaatgtg aagcttaaat gaagataaac ccaaagaaac 300
caagtctgaa gagaccctgg atgagggtcc cccaaaatat actaaatcct gttctgaaaa 360
agggagataa aaccaacttt cccaaaaagg gagatgttgt tcactgctgg tatacaggaa 420
cactacaaga tgggactgtt tttgatacta atattcaaac aagtgcaaag aagaagaaaa 480
atgccaagcc tttaagtttt aaggtcggag taggcaaagt tatcagagga tgggatgaag 540
ctctcttgac tatgagtaaa ggagaaaagg ctcgactgga gattgaacca gaatgggctt 600
acggaaagaa aggacagcct gatgccaaaa ttccnccaaa tgcaaaactc acttttgaag 660
tggaattagt ggatattgat tgaaatagca gtgcttcagc tctaaggata ttagcaacaa 720
tgataaaact tggccttgaa gaaatttacn caactagtta gaacttgtta ctattgtaaa 780
ggaagagtca actggaaaat tcaaggagtt aataaaattt gtttacttgg tcccagcttt 840
tgagagataa atcccttatg aatccctggt ctaaaatact ttcctacagc tgtgtaaaat 900
actggtcaag gagaactttt tccttttacc tcatgttgta aacttaagtg gctcaataaa 960
aattgatccn ctgtcttg 978

<210> 330
<211> 1017
<212> DNA
<213> Homo Sapiens

<400> 330

cgatcggcgg agctcccacc tccgcttaca gctcgctgcc gccgtcctgc cccgcgcccc 60
caggagacct ggaccagacc acgatgtgga aacgctggct cgcgctcgcg ctcgcgctgg 120
tggcggtcgc ctgggtccgc gccgaggaag agctaaggag caaatccaag atctgtgcca 180
atgtgttttg tggagccggc cgggaatgtg cagtcacaga gaaaggggaa cccacctgtc 240
tctgcattga gcaatgcaaa cctcacaaga ggcctgtgtg tggcagtaat ggcaagacct 300
acctcaacca ctgtgaactg catcgagatg cctgcctcac tggatccaaa atccaggttg 360
attacgatgg acactgcaaa gagaagaaat ccgtaagtcc atctgccagc ccagttgttt 420
gctatcagtc caaccgtgat gagctccgac gtcgcatcat ccagtggctg gaagctgaga 480
tcattccaga tggctggttc tctaaaggca gcaactacag tgaaatccta gacaagtatt 540
ttaagaactt tgataatggt gattctcgcc tggactccag tgaattcctg aagtttgtgg 600
aacagaatga aactgccatc aatattacaa cgtatccaga ccaggagaac aacaagttgc 660
ttaggggact ctgtgttgat gctctcattg aactgtctga tgaaaatgct gattggaaac 720
tcagcttcca agagtttctc aagtgcctca acccatcttt caaccctcct gagaagaagt 780
gtgccctgga ggatgaaacg tatgcagatg gagctgagac cgangtggac tgtaacccgc 840
tgtgtctgtg cctgtggaaa ttgggtctgt cagccatgac ctgtgacnga aagaatcaga 900
agggggccca gacccagacn gaggangaga tgancngata tgtccaggag ctccaaagct 960
taggaaacag cttgaaaaga nccagagagg gagcccccaa agagattatg aggaggc 1017

<210> 331
<211> 799
<212> DNA
<213> Homo Sapiens

<400> 331

cccagaaaga tcatcacagt ttctgtaaaa gaagatgtac acctgaaaaa ggcagaaaat 60
gcctggaagc caagccaaaa acgagacagc caagccgatg atcccgaaaa cattaaaacc 120
caggagcttt ttagaaaagt tcgaagtatc ttaaataaat tgacaccaca gatgttcaat 180
caactgatga agcaagtgtc aggacttact gttgacacag aggagcggct gaaaggagtt 240

attgacctgg tctttgagaa ggctattgat gaacccagtt tctctgtggc ttacgcaaac 300
atgtgtcgat gtctagtaac gctgaaagta cccatggcag acaagcctgg taacacagtg 360
aatttccgga agctgctact gaaccgttgc cagaaggagt ttgaaaaaga taaagcagat 420
gatgatgtct ttgagaagaa gcagaaagaa cttgaggctg ccagtgctcc agaggagagg 480
acaaggcttc atgatgaact ggaagaagcc aaggacaaag cccggcggag atccattggc 540
aacatcaagt ttattggaga actctttaaa ctcaaaatgc tgactgaagc catcatgcat 600
gactgtgtgg tgaagctgct aaagaaccat gatgaagaat ccctggagtg cctgtgtcgc 660
ctgctcacca ccattggcaa agacttggac tttgaaaaaa gccaaagcca cgtatggacc 720
cagtacttta atcagatgga gaaaattgtg aaaggaaaga aaaacctcat ctaggatcgg 780
gtcatgcttt caggaggtt 799

<210> 332
<211> 881
<212> DNA
<213> Homo Sapiens

<400> 332
cgatcggcgg agctcccacc tccgcttaca gctcgctgcc gccgtcctgc cccgcgcccc 60
caggagacct ggaccagacc acgatgtgga aacgctggct cgcgctcgcg ctcgcgctgg 120
tggcggtcgc ctgggtccgc gccgaggaag agctaaggag caaatccaag atctgtgcca 180
atgtgttttg tggagccggc cgggaatgtg cagtcacaga gaaaggggaa cccacctgtc 240
tctgcattga gcaatgcaaa cctcacaaga ggcctgtgtg tggcagtaat ggcaagacct 300
acctcaacca ctgtgaactg catcgagatg cctgcctcac tggatccaaa atccaggttg 360
attacgatgg acactgcaaa gagaagaaat ccgtaagtcc atctgccagc ccagttgttt 420
gctatcagtc caaccgtgat gagctccgac gtcgcatcat ccagtggctg gaagctgaga 480
tcattccaga tggctggttc tctaaaggca gcaactacag tgaaatccta gacaagtatt 540
ttaagaactt tgataatggt gattctcgcc tggactccag tgaattcctg aagtttgtgg 600
aacagaatga aactgccatc aatattacaa cgtatccaga ccaggagaac aacaagttgc 660
ttaagggact ctgtgttgat gctctcattg aactgtctga tgaaaatgct gantggaaac 720
ttagctttca agaagtttct caagngcctt naacccatct ttnaaccttc ttgagaagaa 780
tgtgcccttg gaggatgaaa cgtatgccan atggagcttg aaancgaggt ggactgtaan 840
ccgttggnct gggncctggg gaaaattggg tcttggacaa g 881

<210> 333
<211> 810
<212> DNA
<213> Homo Sapiens

<400> 333
gtgcagtcac agagaaaggg gaacccacct gtctctgcat tgagcaatgc aaacctcaca 60
agaggcctgt gtgtggcagt aatggcaaga cctacctcaa ccactgtgaa ctgcatcgag 120
atgcctgcct cactggatcc aaaatccagg ttgattacga tggacactgc aaagagaaga 180
aatccgtaag tccatctgcc agcccagttg tttgctatca gtccaaccgt gatgagctcc 240
gacgtcgcat catccagtgg ctggaagctg agatcattcc agatggctgg ttctctaaag 300
gcagcaacta cagtgaaatc ctagacaagt attttaagaa ctttgataat ggtgattctc 360
gcctggactc cagtgaattc ctgaagtttg tggaacagaa tgaaactgcc atcaatatta 420
caacgtatcc agaccaggag aacaacaagt tgcttagggg actctgtgtt gatgctctca 480
ttgaactgtc tgatgaaaat gctgattgga aactcagctt ccaagagttt ctcaagtgcc 540
tcaacccatc tttcaaccct cctgagaaga agtgtgccct ggaggatgaa acgtatgcag 600
atggagctga gaccgangtg gactgtaacc cgctgtgtct gtgcctgtgg aaattgggtc 660
tgtcagccat gacctgtgac ngaaagaatc agaagggggc ccagacccag acngaggang 720
agatgancng atatgtccag gagctccaaa gcttaggaaa cagcttgaaa aganccagag 780
agggagcccc caaagagatt atgaggaggc 810

<210> 334

<211> 808
<212> DNA
<213> Homo Sapiens

<400> 334
cactttaatt tctttattca tcaatagtat ccgaaaagga agaatcagga gttacaaaaa 60
caagttaaat gcaatataga agcctactaa atacaaatac aagttcacaa acacatatgc 120
aacagaaact tgtttagatt gtttcttgaa gtttgactac ttaaaaacat aggtgtaaag 180
gaaagacatt cagactggtc cacgtgggct tgttagcagg cagaggaacc ctgctttcca 240
aaaactgata tagtccagag tcacggcatg tgggaatgtt tccatggaca ctggatctta 300
acagatgcta tagtgtttac aaaactacac acacagagaa agcccaagga agcctgcagg 360
ctaagcccta tgcttttaga gggctgaagg aaccaaacct agtttaatcc tgtttgtttg 420
ctccatgcaa aactttatgg aagactcccc agactaggct atttagcagc ttccatgaat 480
ggtcctcaga tcatgtgatt ctacggcata gacgacagct gccctattta cacagaagct 540
gcagaactca agaggaatgt ggatttgctc ttgggaagtt caatgttgca gggtaaagta 600
agtcttggat gataaccatg ttctaaatga ctagtgaaga gacactgngg tttcttgctt 660
ttaacaaatt ggnggactct tggcccttct tcccatagng tccaagggct ggtaaaacct 720
ttggattaag gcgtgnctgc ttgggagttc ttccaaggca ctttggacca gggaacctgc 780
atttcaaact ggaccaagtg gaggtttg 808

<210> 335
<211> 758
<212> DNA
<213> Homo Sapiens

<400> 335
gcaattgggt atctcgaaga gcagatcaag ggcctaaaac tatcgaacag attcacaaag 60
aggctaaaat agaagaacaa gaagagcaaa ggaaggtcca gcaactcatg accaaagaga 120
agagaagacc aggtgtccag agagtggacg aaggtgggtg gaacactgta caaggggcca 180
agaacagtcg ggtactggac ccctcaaaat tcctaaaaat cactaagcct acaattgatg 240
aaaaaattca gctggtacct aaagcacagc taggcagctg gggaaaaggc agcagtggtg 300
gagcaaaggc aagtgagact gatgccttac ggtcaagtgc ttccagttta aacagattct 360
ctgccctgca acctccagca ccctcagggt ccacgccatc cacgcctgta gagtttgatt 420
cccgaaggac cttaactagt cgtggaagta tgggcaggga gaagaatgac aagccccttc 480
catctgcaac agctcggcca aatactttca tgaggggtgg cagcagtaaa gacctgctag 540
acaatcagtc tcaagaagag cagcggagag agatgctgga gaccgtgaag cagctnacan 600
gaggtgtgga tgtggagagg aacagccttg agctgaaccg aaataaacaa gggagtcagc 660
aaaaccccga aanttcagca atgtcagctt attgacaagg gttgattatc agaagaggac 720
tgganaggaa gtccaaatct atcatggtna attttttc 758

<210> 336
<211> 785
<212> DNA
<213> Homo Sapiens

<400> 336
aaacttgcaa tgtttgtctt tattttgttc tttatatttt caaagtgaaa agaaatagta 60
ctgagtcaat ttctttttgt ttttttaaat atttgttcta tgtatttaca agccttaaag 120
ttgctctaaa gatttcaaga gtattaagag tacttttctc agggtagcac tttttttttt 180
tttaaacaat tcttggagtt ctgtggtcca cagcatttcc ttctgtttca atgttatgta 240
cgttttgatt actattgnga ttttttaaat tttctgaagc aagctgagag gcaggcagaa 300
agatttgatg ccaaaaaaaa aaaaatcttt cttaccttgt tcaccccaaa ctttctcaaa 360
tctggactaa atgctatacc ttaaaacaaa catgaggngc atcttgaagg ggagggaaat 420
ttatttctct gcttttctat tatacaagtt gtttacagaa actgcaaatt aaaaaattac 480
actggcattt gcagtcctta aaataaatta aaagttctca actttttttt ttttgctaaa 540

```
cattttttta agtatgagtc cttgtttaaa aagaaaagat taaaacagaa aatattttct     600
ataaatacnt gnattttggg tttaagggct cccgccctaa ggnttgaagg ttacttttat     660
cccaggaccc tttttcctcc atggaacccc tttttttcnc ttttcccttt tcccacttcg     720
ngccncccnt ngggggtttc tggcaaaaaa tggcccttgc tgcnctgggg aattggccaa     780
aaacc                                                                785
```

<210> 337
<211> 643
<212> DNA
<213> Homo Sapiens

<400> 337

```
ggaagatggc ggcggccgtt ccacagcggg cgtggaccgt ggagcagctg cgcagtgagc      60
agctgcccaa gaaggacatt atcaagtttc tgcaggaaca cggttcanat tcgtttcttg     120
cagaacataa attattagga aacattaaaa atgtggccaa gacagctaac aaggaccact     180
tggttacagc ctataaccat ctttttgaaa actaagcgtt ttaanggtac tgaangtnta     240
nntaaagtgt ctgancaagt naaaaatgnn aancttantg aagataancc caaagaaacc     300
aagtntgang agaccctgga tgagggtcca ccnaaatata ctaaatctgn tctgaaaaag     360
ggagataaaa ccaactttcc caaaaaggga gatgttgttc actgctggta tacaggaaca     420
ctacaagatg ggactgtttt tgatactaat attcaaacaa gtgcaaagaa naagaaaaat     480
gccaagcctt taagttttaa ggtcggagta cgcaaaagtt atcanaggat ggggatgaag     540
ctctcttgac tatgagtaaa ggagaaaagg ctngactgga aaatggaccc aaaatggctt     600
accggaaaga aagggacagc ctgatnccaa aatttcccca aat                       643
```

<210> 338
<211> 831
<212> DNA
<213> Homo Sapiens

<400> 338

```
caagacagng gatcaatttt tattgagcca cttaagttta caacatgagg taaaaggaaa      60
aagttctcct tgaccagtat tttacacagc tgtaggaaag tattttagac cagggattca     120
taagggattt atctctcaaa agctgggacc aagtaaacaa attttattaa ctccttgaat     180
tttccagttg actcttcctt tacaatagta acaagttcta actagttgng taaatttctt     240
caaggccaag ttttatcatt gttgctaata tccttagagc tgaagcactg ctatttcaat     300
caatatccac taattccact tcaaaagtga gttttgcatt tggnggaatt ttggcatcag     360
gctgtccttt ctttccgtaa gcccattctg gttcaatctc cagtcgagcc ttttctcctt     420
tactcatagt caagagagct tcatcccatc ctctgataac tttgcctact ccgaccttaa     480
aacttaaagg cttggcattt ttcttcttct ttgcacttgt ttgaatatta gtatcaaaaa     540
cagtcccatc ttgtagtgtt cctgtatacc agcagtgaac aacatctccc tttttgggaa     600
agttggtttt atctcccttt ttcagaacag gatttagtat attttggggg accctcatcc     660
agggtctctt cagacttggt ttctttgggt ttatcttcat ttaagcttca catttttac      720
ttgctcagac actttactta tactttcagt acccttaaaa ccgcttaagt ttcaaaaaag     780
agggttatag gctgnaaccc aaggggggcc ttggtnagct ggccttgggc c               831
```

<210> 339
<211> 758
<212> DNA
<213> Homo Sapiens

<400> 339

```
ccaacatgtc ccgtggttcc agcgccggtt ttgaccgcca cattaccatt ttttcacccg      60
agggtcggct ctaccaagta gaatatgctt ttaaggctat taaccagggt ggccttacat     120
cagtagctgt cagagggaaa gactgtgcag taattgtcac acagaagaaa gtacctgaca     180
aattattgga ttccagcaca gtgactcact tattcaagat aactgaaaac attggttgtg     240
```

tgatgaccgg aatgacagct gacagcagat cccaggtaca gagggcacgc tatgaggcag 300
ctaactggaa atacaagtat ggctatgaga ttcctgtgga catgctgtgt aaaagaattg 360
ccgatatttc tcaggtctac acacagaatg ctgaaatgag gcctcttggt tgttgtatga 420
ttttaattgg tatagatgaa gagcaaggcc ctcaggtata taagtgtgat cctgcaggtt 480
actactgtgg gtttaaagcc actgcagcgg gagttaaaca aactgagtca accagcttcc 540
ttgaaaaaaa agtgaagaag aaatttgatt ggacatttga acagacagtg gaaactgcaa 600
ttacatgcct gtctactggt ctatcaattg atttcaaacc ttcagaaata gaagttggag 660
tagtgacagt tgaaaatcct aaattcagga ttcttacngg aagcagagat tgatgcttac 720
cttgtgnttt agcngagagg agacttaacc attggccg 758

<210> 340
<211> 840
<212> DNA
<213> Homo Sapiens

<400> 340
ccaaaagcct tgttttattt atatagagtc ctaaccactt cggtggtagg aggagtggga 60
gaggctcctt tttcaatcca gggacctcca tgatgttggt ttgttgttac caaacacaca 120
ggtaagtggc atcacggatc tggtaaacta acgacaatgt ttagtctctc tctgctagag 180
caacaaggtg agcatcaatc tctgcttctg taanaatcct gaatttagga ttttcaactg 240
tcactactcc aacttctatt tctgaaggtt tgaaatcaat tgatagaaca gtagacaggc 300
atgtaattgc agtttccact gtctgttcaa atgtccaatc aaatttcttc ttcacttttt 360
tttcaaggaa gctggttgac tcagtttgtt taactcccgc tgcagtggct ttaaacccac 420
agtagtaacc tgcaggatca cacttatata cctgagggcc ttgctcttca tctataccaa 480
ttaaaatcat acaacaacca agaggcctca tttcagcatt ctgtgtgtag acctgagaaa 540
tatcggcaat tcttttacac agcatgtcca caggaatctc atagccatac ttggatttcc 600
agttagctgc ctcatagccg tgcccttctg tacctgggat ctgctgtcag ctgcattccg 660
gtcatcacac aaccaatggt ttcagttatc ttggaataag tgaggtcact gngctggaat 720
nccaataatt tggcaggnac ctttctttct ggggngacaa ttactggccc agtcttttcc 780
tttggacagn tactggaggt aagggccacc ctgggttaat agccctttaa aggcntaatc 840

<210> 341
<211> 793
<212> DNA
<213> Homo Sapiens

<400> 341
cactttaatt tctttattca tnaatagtat ccgaaaagga agaatcagga gttacaaaaa 60
caagttaaat gcaatataga agcctactaa atacaaatac aagttcacaa acacatatgc 120
aacagaaact tgtttanatt gtttcttgaa gtttgactac ttaaaaacat aggngtaaag 180
gaaagacatt canactggtc cncgngggct tgntagcagg cagaggaacc ctgctttcca 240
aaaactgnta tagtccanan tcncggcatg ngggaatgnt tccatggacn ctggatctta 300
acagatgcta tagggtttac aaaactacnc acncagagaa agcccaagga agcctgcagg 360
ctaagcccta tgcttttaga gggctgaagg aaccaaacct agtttaatcc tgtttgnttg 420
ctccatgcaa aacttttgg aaactccccc agactaggct ttttancagn nttccattga 480
atggggcnnc aaancnttgg gaattttacg gntnaaancn aaagntngcc ttntttnccc 540
ccgaaagctt tgaaaaactt ttcagngggn atnggggaat ttggnttntt ggggnngttc 600
aattgttncc ngggtaaaaa ganacccttg gggaggnaaa cccctgngtt tnaannggcc 660
ttaggggaaa naacccntgg gggtntcntt ggnnttttaa caaaattggg gggncntttt 720
ggnccttcct cccaaaaggg ggcccanggn ctgnggaaaa aacctttggg antaaggggg 780
gncccnnctt gga 793

<210> 342
<211> 906
<212> DNA

<213> Homo Sapiens

<400> 342

ccaacatgtc ccgtggttcc agcgccggtt ttgaccgcca cattaccatt ttttcacccg 60
agggtcggct ctaccaagta gaatatgctt ttaaggctat taaccagggt ggccttacat 120
cagtagctgt cagagggaaa gactgtgcag taattgtcac acagaagaaa gtacctgaca 180
aattattgga ttccagcaca gtgactcact tattcaagat aactgaaaac attggttgtg 240
tgatgaccgg aatgacagct gacagcagat cccaggtaca gagggcacgc tatgaggcag 300
ctaactggaa atacaagtat ggctatgaga ttcctgtgga catgctgtgt aaaagaattg 360
ccgatatttc tcaggtctac acacagaatg ctgaaatgag gcctcttggt tgttgtatga 420
ttttaattgg tatagatgaa gagcaaggcc ctcaggtata taagtgtgat cctgcaggtt 480
actactgtgg gtttaaagcc actgcagcgg gagttaaaca aactgagtca accagcttcc 540
ttgaaaaaaa agtgaagaag aaatttgatt ggacatttga acagacagtg gaaactgcaa 600
ttacatgcct gtctactgtt ctatcaattg atttcaaacc ttcagaaata gaagttggag 660
tagtgacagt tgaaaatcct aaattcagga ttnttacaga agcagagatt gatgctcacc 720
ttgttgctct agcagagaga gactaaacat tgtcgttagt ttaccagatc cgtgatgcca 780
cttacctgtg tgtttggtaa caacaaacca acatcatgga ggtccctgga ttgaaaaagg 840
agcctctccc actcctccta ccaccgaagt ggttaggact ctatataaat aaaacaaggc 900
ttttgg 906

<210> 343
<211> 875
<212> DNA
<213> Homo Sapiens

<400> 343

gcaaggcaat tgagcgtgga acaggaaatg acaattatag aacaacggga attgctacaa 60
tcgaggtgtt tttaccacca agactaaaaa aagataggaa aaacttgttg gagacccgat 120
tgcacatcac tggcagagaa ctgaggtcca aaatagctga aacctttgga cttcaagaaa 180
attatatcaa aattgtcata aataagaagc aactacaact agggaaaacc cttgaagaac 240
aaggcgtggc tcacaatgtg aaagcgatgg tgcttgaact aaaacaatct gaagaggacg 300
cgaggaaaaa cttccagtta gaggaagagg agcaaaatga ggccaaactc aaagaaaaac 360
aaattcagag gaccaagaga ggactagaaa tactggcaaa gagagcagca gagacagtgg 420
tggatccaga aatgacaccg tacttagaca tagctaacca gacaggcaga tcaatcagaa 480
ttcccccatc agaaagaaaa gcccttatgt tagctatggg atatcatgag aagggcagag 540
ctttcctgaa aagaaaagaa tatggaatag ccttgccatg tctgttggac gctgacaaat 600
atttctgtga gtgttgcaga gagctgctgg acacagtgga taactatgcc cgtcttcagc 660
tggatatagt gtggtgttac tttcgcctgg aacagctgga atgccttgat gatgcagaaa 720
aaaaattaac ttggnccaga aatgctttaa aaattggtcc ggagaaatcn tcgaaactgg 780
tccccntaaa nggaattgtg gggaaaagag aangtctggt tctaagactn tacttacttt 840
nagggatccg aacttttcca gggggaatga tgtaa 875

<210> 344
<211> 629
<212> DNA
<213> Homo Sapiens

<400> 344

atatttccca ccttttattt ccatcggtat catccgttta aaaagaatga caagaagatt 60
cccatcagtc caaactggac cacccacact ttgaaaaagt tggagcattt cagccggctc 120
cgcatgatcc atcctgtctt cagtcagtgc cttctggaag ggagggaaag tcttggatgc 180
acctggcact caatccactc ggcacctggc tgctgctgcg gtcctggggc tggaaggaac 240
tcccactggg cacacatcta cagaggagtg cgtggcgcag tgaggacggt tactgctgga 300
gccgacacac agcgaactac atacttttag aaagagcctc tgtcacatgg ctagaacaac 360
aacaacaaca aagaaaaccc acaaaaaacc tggagaaaat atatctaaat ctctgatagg 420

tctcttagct agcagtgagt tcagtatgac agcacagagt ctaaaaatat taattaaaaa 480
taaattgctt tggttagcat ttaaaccttt cccattcaat agaagatttc tgtaatgagg 540
aatgctgaat atatataaag cctgccactc aatctttgaa tttcnggggg cgcaatttta 600
ctgaactaag ancctaaaa caactggcg 629

<210> 345
<211> 724
<212> DNA
<213> Homo Sapiens

<400> 345
cttgggtggt tattttnctt ttctgngtcc ttccccanca gcagttggaa ttttcttttg 60
aacacaaagt aaattaatgt tnatactgnt ttttcacctg agtcatgtaa aaggtgactc 120
ctttcatttt aaaaagttat atttaatttt tgggggcctt aattaaaatt taacatttaa 180
ccatgngtnn tttttttgta aacagtctac atgtcaacaa atggataagg gttaacaaag 240
gcaaatnctg acttcatttg tgttttaaac acgattatat gaatttttct tttttaatta 300
aaaaaatgac ataaaaccat tcatataggt cctcttctct caactgcttt gagatatagc 360
tttaaatatg ggtagatcaa gacaagtaat gttggnaatc tcttatcttg catagaaaag 420
aaaaaaataa aggaacttat ttccttccta aggtctcagc tagtttctta ngtcttttct 480
tcagctccaa tggaaattnc tcatagcact tcttacagac tggcttcatg tcaaactcca 540
caaacttatt cttgantgtt aatttagtgt tgcaggtana acaggcaaag cagttcacgc 600
accaggcctt attaagagca gagaccccca tcaccttcta taacacgatt gcagtgggaa 660
gcaaacatca ccaaatagct gggttatagn gagtttcaca atatgcccag gcctttcctt 720
tcaa 724

<210> 346
<211> 907
<212> DNA
<213> Homo Sapiens

<400> 346
agagcgaaat tttaccactg agcaagtgac tgccatgctt ttgtccaaac tgaaggagac 60
agccgaaagt gttcttaaga agcctgtagt tgactgtgtt gtttcggttc cttgtttcta 120
tactgatgca gaaagacgat cagtgatgga tgcaacacag attgctggtc ttaattgctt 180
gcgattaatg aatgaaacca ctgcagttgc tcttgcatat ggaatctata agcaggatct 240
tcctgcctta gaagagaaac caagaaatgt agtttttgta gacatgggcc actctgctta 300
tcaagtttct gtatgtgcat ttaatagagg aaaactgaaa gttctggcca ctgcatttga 360
cacgacattg ggaggtagaa aatttgatga agtgttagta aatcacttct gtgaagaatt 420
tgggaagaaa tacaagctag acattaagtc caaaatccgt gcattattac gactctctca 480
ggagtgtgag aaactcaaga aattgatgag tgcaaatgct tcagatctcc ctttgagcat 540
tgaatgtttt atgaatgatg ttgatgtatc tggaactatg aatagaggca aatttctgga 600
gatgtgcaat gatctcttag ctagagtgga gccaccactt cgtagtgttt tggaacaaaa 660
ccaagttaaa gaaagaagat atttatgcag tggagatagt tggtggtgct acacgaatcc 720
ctgcggtaaa aggagaagat cagcaaaatt tttcggtaaa gaacttagta caaccnttaa 780
atgctgatga aactgcactc gaggctgggc cattgcantg ggccatctta tcgcctgctt 840
tcaaagtccg agaantttct atcactgatg tagtaccata tccatatctc tgaaaaggga 900
atcttcc 907

<210> 347
<211> 711
<212> DNA
<213> Homo Sapiens

<400> 347
ataatagnct gttttaatan aaacaagngt tggaatcaat caatgnccat ttcaggaagc 60

ttnttgtctg aatccgaagg cncagctgng tctgtaccct gctcancagc ctgggggcct 120
gggttgtctc cttgnccatc cactggtcca ttctgctctg catttttttg ttcctntttt 180
ggaggttcca ctttgggttt gggctttgaa attatagggc tacaagtact tgncagctcc 240
ttaattttag cttcaatctc ttttgacttg acaactggat ccatggncaa actntgcttg 300
ttctgcaaat ttagcttggt attcatccac tccattgctt catttgggct tttttctacc 360
tttgtcatgt cagcagcatc cgaatgatca tactggtcct ccttgntttt gaaagagctg 420
attattttca tatactgntg aatctgnttc cctagttctt caaataattt tggtcgttct 480
tnaaattcct ggaaacgtat nttaataggt tgacctaaat tttttaattc agccaactta 540
tcaacataaa cttgctttgg ctggcttctc catcctcata caaccaattt tcagtatctt 600
ccagtttcaa agtaaaactg ttacgancat nttcactnnc aaacttctca tattcnccac 660
taaagcttgg ctctcatttc ataccccata tttcctccca ctggggtctt a 711

<210> 348
<211> 862
<212> DNA
<213> Homo Sapiens

<400> 348
cttgagcctc atgtaaccgg cgctttagat caccaatctc ctcttgggct tcagatttaa 60
tgtcatttgc aatgactact gcagtctgga gatcagcctg aaactgccgc cattccgcag 120
attcttcccg aagtcttctg tggagtgtct ttatttctct ttccatgtcg tgcttttggt 180
cctggagttt tttaactgta ttctctagat cagaaataat gaggttgtca tgaagtttca 240
cagcacgatg ttgttctact tcatcttcaa gttcaaagat ggtttctttc atgtcactcc 300
tttctgtttc tttttcatcc aggtctgatc ttaatttttc taacgtcata ttcaaatctt 360
caatttgttt cttagcttct tcttggaagg ctcggtattc atcctctacc ttagcaatgg 420
catcctgtaa tcgattggca tcatttcggg tatgagccag atcttcctgc aagctactag 480
ccaaagtctc tgctttttct ttgtccagcc tgacactctc caggaggtcc tgaatatcag 540
atttgnctcc agagttatgg atagaataca gctctgccac tttctgcttt tcattctcca 600
gctgagcctt caggcgattc atctctatct ggtcactggc cactgnggct ttgnattcct 660
ctaacgtggc tgncaaggct gcttttcctt tctgctcnac tcaaataaat tcgctccata 720
tgggnggact ggcgttcctt tggagtgccc cctatcattt cttggngctt tccttantgg 780
ccttgggttc tggccatttt tccaaagtat tggctttaaa atggctggct tgggacnccc 840
aaggaaagct ggttcccggt tc 862

<210> 349
<211> 832
<212> DNA
<213> Homo Sapiens

<400> 349
aagactttcc tacatcagtt ttatttaaaa cacaaacaag tatttctctt tctgtaaggg 60
caaatggttc aaataatgcg gaacacgaaa cattgactaa tacaagtgct ttaaatatga 120
aacaaaatta ttttttaaaa aagcaaaaga ataaagaata tatacaaaag ggacctggaa 180
tctgtaagct gattccaaaa acgaaataag tagaaaatcc atggtgaaac ctgaacattc 240
tacctctgct ttggagaagg gctatcatac aacattcagt cagctgaaga tggattggta 300
gaggtgtgtc tatacataaa cttcagtcat ttttgcttgt gcagaatcat cccaatcttc 360
ccaagactga atgggcagtc ctgtggcttt cttcctttтc catattccca acaaggctac 420
gtgaagttca actcttgatg agccgcttac aacagcagtt ccttaggagc caacatgaca 480
ggtgggtcag atttccctat gagaaacaaa actggccacc tacagcaaaa tatcaaaatg 540
ggtaagtcct tccttcctct tcctcctgat tatatacaac atatctcctt tcaagactat 600
tatttccatc atgcttattc cttcacaaat ctaaaccttg aggtgatatg aaggaaacca 660
acatcangaa aagaaaactc aattcagaaa tgaagaaaac tggcaggtat acaatacacc 720
cccagaacat ctcaatatcc ctggccagta caattcaagt gnactgggta caggcccata 780
ggattaaata attgggcagc ttgggaataa agctcatttt tttnccctca gg 832

<210> 350
<211> 782
<212> DNA
<213> Homo Sapiens

<400> 350
ccnacatcag tttnattnaa aacacaanca agnatttctn tttcngnang gncaaagggt 60
tnaaanaang cgnancacna ancatngact aatncaaggg cttnaaatat gaancaaaat 120
nattttttaa aaaagcaaaa naataaanaa tatatncaaa ngggaccngn aatcngnaag 180
cngatnccaa aaccnaaata agtaaaaaan ccanggggaa nccngancat tcnacctnng 240
nttngnaaaa gggctatcat ncaacattca gncagntgaa nanggatngg nanaggnggg 300
ncnatncata ancttcagnc attttngctn gggcaaaatc atcccaatnt tcccaanact 360
gaanggncag cccnggggct ttcttccttt nccanattcc caacanggnt acgngaagtt 420
caactntnga nganccgttt acaacagcag ttccttagga nccancatga caggggggnc 480
aaatttccct atgagaanca aaacnggcca cctacagcaa aatatcaaaa ggggnaagnc 540
cttccttcct cttcctccng attatatnca ccatatctcc tttcangact atnatttcca 600
tcaggctnat tccttcacaa atntaaacct tgaggggata tgaaggaacc caacttcngg 660
aaangaaaac tcaattcana aattgaagaa acctggcagg tatacaatac ccccccaggn 720
catntcaana tccctggcac aagnnccaat tcagggncct ggtaccagcc ccatagaana 780
aa 782

<210> 351
<211> 775
<212> DNA
<213> Homo Sapiens

<400> 351
ggcaaggcgg ctgctgcgaa tcaccaaaag aacagggatg aaagaagaga agaaccttca 60
ggaaggaaat gaagttgatt ctcagagcag tattagaaca gaagctaaag aggcttcagg 120
tgagaccaca ggagttgaca tcactaaaat tcaagtcaag agatgtgaga ccatgagaga 180
gaagcacatg cagaaacagc aggagaggga aaaatcagtc ttgacacctc ttcggggaga 240
tgtagcatct tgcaataccc aagtggcaga gaaaccagtg ctcactgctg tgccaggaat 300
cacacggcac ctgaccaagc ggcttcccac aaagtcatcc cagaaggtgg aggtagaaac 360
ctcagggatt ggagactcat tattgaatgt gaaatgtgca gcacagacct tggaaaaaag 420
gggtaaagct aaacccaaag tgaacgtgaa gccatctgtg gttaaagttg tgtcatcccc 480
caaattggcc ccaaaacgta aggcagtgga gatgcacgct gctgtcattg ccgctgtgaa 540
gccactcagc tccagcagtg tcctacagga acccccagcc aaaaaggcag ctgtggctgt 600
tgtcccgctt gtctctgagg acaaatcagt cactgtgcct gaagcagaaa atcctagaga 660
cagtctttgt gcttgncttc aacccagtcc ttnttcagat tccttacccc cagaggtgtc 720
ttggnccttt cttcatncca aatggagcct tgaaaaactt cggccgactt agctt 775

<210> 352
<211> 865
<212> DNA
<213> Homo Sapiens

<400> 352
cctacatcag ttttatttaa aacacaaaca agtatttctc tttctgtaag ggcaaatggt 60
tcaaataatg cggaacacga aacattgact aatacaagtg ctttaaatat gaaacaaaat 120
tatttttttaa aaaagcaaaa gaataaagaa tatatacaaa agggacctgg aatctgtaag 180
gtgattccaa aaacgaaata agtagaaaat ccatggtgaa acctgaacat tctacctctg 240
ctttggagaa gggctatcat acaacattca gtcagctgaa gatggattgg tagaggtgtg 300
tctatacata aacttcagtc atttttgctt gtgcagaatc atcccaatct tcccaagact 360
gaatgggcag tcctgtggct ttcttccttt tccatattcc caacaaggct acgtgaagtt 420
caactcttga tgagccgctt acaacagcag ttccttagga gccaacatga caggtgggtc 480

agatttccct atgagaaaca aaactggcca cctacagcaa aatatcaaaa tgggtaagtc 540
cttccttcct cttcctcctg attatataca acatatctcc tttcaagact attatttcca 600
tcatgcttaa tncttccaaa tctaaacctt gaggngatat tgaanggaaa cccaccttca 660
nggaaaagaa aacctcaatt tcagaaatgg aagaaaaact ggcagggtat accaatacac 720
ccccccagag catttttaaa atatccctgg ncacaagtnc caattcaagg gnacctggtt 780
ccggnccata gaataaaana ntgggcactt tggaaaaaag cnccattttt ttcccttcag 840
gggggggttaa aagggccccc aaacc 865

<210> 353
<211> 875
<212> DNA
<213> Homo Sapiens

<400> 353
gactttccta catcagtttt atttaaaaca caaacaagta tttctctttc tgtaagggca 60
aatggttcaa ataatgcgga acacgaaaca ttgactaata caagtgcttt aaatatgaaa 120
caaaattatt ttttaaaaaa gcaaaagaat aaagaatata tacaaaaggg acctggaatc 180
tgtaagctga ttccaaaaac gaaataagta gaaaatccat ggtgaaacct gaacattcta 240
cctctgcttt ggagaagggc tatcatacaa cattcagtca gctgaagatg gattggtaga 300
ggtgtgtcta tacataaact tcagtcattt ttgcttgtgc agaatcatcc caatcttccc 360
aagactgaat gggcagtcct gtggctttct tccttttcca tattcccaac aaggctacgt 420
gaagttcaac tcttgatgag ccgcttacaa cagcagttcc ttaggagcca acatgacagg 480
tgggtcagat ttccctatga gaaacaaaac tggccaccta cagcaaaata tcaaaatggg 540
gtaagtcctt ccttcctctt cctcctgatt atatacaaca tatctccttt caagactatt 600
atttccatca tgcttattcc ttccaaatct aaacccttga ggtgatatga aggaaaccaa 660
catcaagaaa aagaaaactc aattcagaaa atgaagaaaa ctggcaggga tacaatacac 720
ccccagagca tcttcaatat cccctgggca cagtncccaa ttcagggact gggtacaggc 780
ccataagaat naaataattg ggcagctttg gaataaagcc tcatttttt cccttcaggn 840
gggttaaagg ggcccccaa accaaaaact ggggc 875

<210> 354
<211> 705
<212> DNA
<213> Homo Sapiens

<400> 354
gactttccta catcagtttt atttaaaaca canacangta tttctctttc tgtaagggca 60
aatggttcaa ataatgcgga acacgaaaca ttgactaata caagngcttt aaatatgaaa 120
caaaattatt ttttaaaaaa gcaaaagaat aaagaatata tacaaaaggg acctggaatn 180
tgtaaggtga ttccaaaaac gaaataagta gaaaatccat ggtgaaacct gaacattcta 240
cctctgcttt ggagaagggc tatcatacaa cattcagtca gctgaagatg gattggtaga 300
ggtgtgtcta tacataaact tcagtcattt ttgcttgtgc agaatcatcc caatcttccc 360
aagactgaat gggcagtcct gtggctttct tccttttcca tattcccaac aaggctacgt 420
gaagttcaac tcttgatgag ccgcttacaa cagcagttcc ttaggagcca acatgacagg 480
tgggtcagat ttccctatga gaaacaaaac tggccaccta cagcaaaata tcaaaatggg 540
taagnccttc cttcctcttc ctnctgatta tatacnncat atctcctttc aagactatta 600
tttccatcat gcttattcct tccaaatcta aaccttgagg ngatatgaan ggaaaccaca 660
tcaggaaaag gaaactcaat tccgaaatga ngaaaactgg caggt 705

<210> 355
<211> 862
<212> DNA
<213> Homo Sapiens

<400> 355

ccatcagtga gagcgagctg agcgccagcg ccactgagct gctgcaggac tacatgctga 60
cgctgcgcac caagctgtca tcacaggaga tccagcagtt tgcagcactg ctgcacgagt 120
accgcaatgg ggcctctatc cacgagttct gcatcaacct gcggcagctc tacggggaca 180
gccgcaagtt cctgctgctt ggtctgaggc ccttcatccc tgagaaggac agccagcact 240
tcgagaactt cctggagacc attggcgtga aggatggccg cggcatcatc actgacagct 300
ttggcaggca ccggcgggcc ctgagcacca catccagttc caccaccaat gggaacaggg 360
ccacgggcag ctctgatgac cggtcggcac cctcagaggg ggatgagtgg gaccgcatga 420
tctcggacat cagcagcgac attgaggcgc tgggctgcag catggaccag gactcagcat 480
gatggacagt ggatgggggg gcacccacac cttccgcgca gtcgtcatag gccttcccag 540
aaggagctgc ccagacctgc gtgtcagccc ttggtggtgg ccagggnanag gcgcccggtg 600
cagatggccc cgggcggccc aggtcctnta ctgtgaagga gcagggagct gccgagggac 660
acgagcctca gtgcggggtg gaaggctctt tgccttgtcc accagggntc agccaagccc 720
tgcagtgtgt ccccgctcgg ggagggcccg gccgagcggg cagggagagc cagtcctgtc 780
ggctgggccc ttggacggct gtcagttttg cacatgatgt tcctattgta actntcagag 840
accttaaaaa gaagtttact gc 862

<210> 356
<211> 750
<212> DNA
<213> Homo Sapiens

<400> 356
ccatcagtga gagcgagctg agcgccagcg ccactgagct gctgcaggac tacatgctga 60
cgctgcgcac caagctgtca tcacaggaga tccagcagtt tgcagcactg ctgcacgagt 120
accgcaatgg ggcctctatc cacgagttct gcatcaacct gcggcagctc tacggggaca 180
gccgcaagtt cctgctgctt ggtctgaggc ccttcatccc tgagaaggac agccagcact 240
tcgagaactt cctggagacc attggcgtga aggatggccg cggcatcatc actgacagct 300
ttggcaggca ccggcgggcc ctgagcacca catccagttc caccaccaat gggaacaggg 360
ccacgggcag ctctgatgac cggtcggcac cctcagaggg ggatgagtgg gaccgcatga 420
tctcggacat cagcagcgac attgaggcgc tgggctgcag catggaccag gactcagcat 480
gatggacagt ggatgggggg gcacccacac cttccgcgca gtcgtcatag gccttcccag 540
aaggagctgc cagacctgcg tgtcaaccct tggtggtggc cagggagagg cgcccggtgc 600
agatggcccc gggccggccc aagtcctcta ctgtgaagga acagggagct tgccgangga 660
cacgaacctc aatgccgggg tggaangctc tttggcttgt ccaccaaggc ttagcccagc 720
ccttgcaatg nggccccgct tcggggaagg 750

<210> 357
<211> 725
<212> DNA
<213> Homo Sapiens

<400> 357
gcagtaaact tctttttaag gtctctgana gttacaatag gaacatcatg tgcaaaactg 60
acagccgtcc aagggcccag ccgacaggac tggctctccc tgcccgctcg gccgggccct 120
ccccgagcgg ggacacactg cagggcttgg ctganccctg gtggacaagg caaagagcct 180
tccaccccgc actgaggctc gtgtccctcg gcagctccct gctccttcac agtanaggac 240
ctgggccgcc cggggccatc tgcaccgggc gcctntccct ggccaccacc aagggctgac 300
acgcaggtct gggcagctcc ttctgggaag gcctatgacg actgcgcgga aggtgtgggt 360
gccccccccat ccactgtcca tcatgctgag tcctggtcca tgctgcagcc cagcgcctca 420
atgtcgctgc tgatgtccga natcatgcgg tcccactcat ccccctctga gggtgccgac 480
cggtcatcag agctgcccgt ggccctgttc ccattggtgg tggaactgga tgtggtgctc 540
agggcccgcc ggtgcctgcc aaagctgtca gtgatgatgc cgcggccatc cttnacgcca 600
atggtctnca ggaagttctc gaantgctgg ctgnccttta tcagggatga anggccttan 660
accaagcagc anggaacttg cggnttntcc ccgaaaanct tgccncaggt tgatgcaaaa 720
acttc 725

<210> 358
<211> 813
<212> DNA
<213> Homo Sapiens

<400> 358
aaggcgacag ctgcccattc cgtcactgtg aagctgcaat aggaaatgaa actgtttgca 60
cattatggca agaagggcgc tgttttcgac aggtgtgcag gtttcggcac atggagattg 120
ataaaaaacg cagtgaaatt ccttgttatt gggaaaatca gccaacagga tgtcaaaaat 180
taaactgcgc tttccatcac aatagaggac gatatgttga tggccttttc ctacctccga 240
gcaaaactgt gttgcccact gtgcctgagt caccagaaga ggaagtgaag gctagccaac 300
tttcagttca gcagaacaaa ttgtctgtcc agtccaatcc ttcccctcag ctgcggagcg 360
ttatgaaagt agaaagttcc gaaaatgttc ctagccccac gcatccacca gttgtaatta 420
atgctgcaga tgatgatgaa gatgatgatg atcagttttc tgaggaaggt gatgaaacca 480
aaacacctac cctgcaacca actcctgaag ttcacaatgg attacgagtg acttctgtcc 540
ggaaacctgc agtcaatata aagcaaggtg aatgtttgaa ttttggaata aaaactcttg 600
aggaaattaa gtcaaagaaa atgaaggaaa aatctaagaa gcaaggtgag ggttcttcag 660
gagtttccag tcttttactt caccccttgag ccccgntcca ngtcctgaaa aagaaaatgt 720
caaggactgt ggtgangaca gtactntttt caccaaccaa ggagaagaac ccttggttag 780
atgagtctta ctgagagact ggggaaacca aaa 813

<210> 359
<211> 756
<212> DNA
<213> Homo Sapiens

<400> 359
cagcagagga gaggcagagg ataaaagagg aagagaaaag ggcagcagag gagaggcaaa 60
gggccagggc agaggaggaa gagaaggcta aggtagaaga gcagaaacgt aacaagcagc 120
tagaagagaa aaaacgtgcc atgcaagaga caaagataaa aggggaaaag gtagaacaga 180
aaatagaagg gaaatgggta aatgaaaaga aagcacaaga agataaactt cagacagctg 240
tcctaaagaa acagggagaa gagaagggaa ctaaagtgca agctaaaaga gaaaagctcc 300
aagaagacaa gcctaccttc aaaaaagaag agatcaaaga tgaaaagatt aaaaaggaca 360
aagaacccaa agaagaagtt aagagcttca tggatcgaaa gaagggattt acagaagtta 420
agtcgcagaa tggagaattc atgacccaca aacttaaaca tactgagaat actttcagcc 480
gccctggagg gagggccagc gtggacacca aggaggctga gggcgccccc caggtggaag 540
ccggcaaaag gctggaggag cttcgtcgtc gtcgcgggga gaccgagagc cgaagagttc 600
gagaagctca aacagaagca gcaggaggcg gctttggagc tggaggaact caaggaaaaa 660
ganggaggag agaaggaagg tcctgganga ggaagagcag aggaaggaac aggaggaaag 720
ccgatcggaa aaccttcaag aggaggaaga agaaga 756

<210> 360
<211> 706
<212> DNA
<213> Homo Sapiens

<400> 360
aatttcttcc atgctttatt ataaagngca naaacaacat gacttctgta tttaaaaaaa 60
caaaaactac ggttcatttt tctagatact gcacacattc cgcaggcaat tttaaacttg 120
gatcttctgt tgacttcana tgnggttggt atcactgctc aaatacagag ttatgatgat 180
cagtanaaaa gtctntattt cacagcatgg gtttctttan aaacaggctc ctgngcaaag 240
gcagtacttt taccatgaac atctntanac tgggattatt aaatatagng ataatataca 300
tgggtttact gggatattga aaaataaaag ataatgaacc caatttagta aatcaacata 360
aatacaaaac agagcgaatt agccctntac aactgagctc gtcctgcgtc ttgagcttgg 420
gttctttctg gaactgtctc aaaccttagt gggggaagtg accttatcca canattgctt 480

ttcccagagg ttccgcttgc tggataccgt ctcctggnct caagtcanaa ggtttgggag 540
caggtgactt gtttccatct ggggttttaa gttagccatt cattgatgcg gctagaaacc 600
cctaccttta agccagcagt ttnccttatt tgggggngcc ctgctgcant ggggggatga 660
aaacncattt cctttntcca catactcttg aaggttgcgg tacacc 706

<210> 361
<211> 726
<212> DNA
<213> Homo Sapiens

<400> 361
gccatgctac gcgcgctgag ccgcctgggc gcggggaccc cgtgcaggcc ccgggcccnt 60
ctgntgctgc cagcgcgcgg ccgcaagacc cgccacgacc cgctggccaa atccaagatc 120
gagcgagtga acatgccgcc cgcggtggac cctgcggagt tcttcgtgct gatggagcgt 180
taccagcact accgncagac cgtgcgcgcc ctcaggatgg anttcgtgtc cgaggtgcat 240
aggaaggtgc acgaggcccg agccggngtt ctggcgganc gcaaggccct gaaggacgcc 300
gccgagcacc gcnagctgat ggcctggaac caggcggaga accggcggct gnacgagctg 360
cggatagcga ggctgcggca ggaggancgg nagcaggagc agtgncaggc gttggagcan 420
gcccgcaagg ccgaagaggt gcangcctgg gcgcagcgca aggagcgnga antgctgcag 480
ctgcagnaag aggtgaaaaa cttcatcacc cgagagaacc tggaggcacg ggtggaagca 540
gcattggact cccggaagaa ctacaactgg gccatcacca gagaggggct ggtggtcagg 600
ccacaacgca nggacttcta agggcccagt aaggacagtg cccggcaggg accatgtatg 660
tatcatggcg gaagagttgc ccttgactgg aattaaagca attggtgttg cttatgagga 720
aaggtt 726

<210> 362
<211> 747
<212> DNA
<213> Homo Sapiens

<400> 362
gcaggaagga attccattna ttggggatgc attttcacaa tatatgttna tnggagcgat 60
ccattatcag ggaaaagtat caagggttna taaaattttt aggaanggca nattcacaga 120
acatgctagt cagctngcag ttttacctcg taaagatanc aganaattat agncaaacca 180
gtaaacangg aattnacttt tcaaaagatt aaatccaaac tgancaaaat tntaccctaa 240
aacttactcc atccaaatat tggaataaaa gtcagcaggg atncattctn ttctgaactt 300
tanattttnt anaaaaatat gtaatagnga tcaggaggag ctnttgttca aaagtncaac 360
aaagcaangt taccttacca taggccttaa ttcaaacttt gatccatttc actccaanga 420
cgggagtcaa ngctacctgg gacacttgta tttgtaaatt ctgatttagc ttatngtaaa 480
cttgggccta ctttgncatg agggtttgac ttcngcattn ttcggggntt tccttccttt 540
ggcttaggtt tgctaaagct agaanattca attgctcttt acagacttat gaggaanata 600
gactttgtaa cgcanatgtc acttttaatg ccagccctgc cctggttagc ncttctggag 660
gaatactgca gataagaaaa atagttattt gggaggctcc ctcagngggg tanggaattg 720
gggactaacc ncaattttng gttaaag 747

<210> 363
<211> 1227
<212> DNA
<213> Homo Sapiens

<400> 363
gtgaagaccc tgagtccgtt tatttgccgg taggagcagg ctccaacatt ttgtctccat 60
caaacgttga ctgggaagta gaaacagata attctgattt accagcaggt ggagacatag 120
gaccaccaaa tggtgccagc aaggaaatac cagaattgga agaagaaaaa acaattccta 180
ccaaagagcc tgagcagata aaatcagaat acaaggaaga aagatgcaca gagaagaatg 240

aagatcgtca tgcactacac atggattaca tacttgtaaa ccgtgaagaa aattcacact 300
caaagccaga gacctgtgaa gaaagagaaa gcatagctga attagaattg tatgtaggtt 360
ccaaagaaac agggctgcag ggaactcagt tagcaagctt cccagacaca tgtcagccag 420
cctccttaaa tgaaagaaaa ggtctctctg cagagaaaat gtcttctaaa ggcgatacga 480
gatcatcttt tgaaagccct gcacaagacc agagttggat gttcttgggc catagtgagg 540
ttggtgatcc atcactggat gccagggact cagggcctgg gtggtctggc aagactgtgg 600
agccgttctc tgaactcggc ttgggtgagg gtccccagct gcagattctg gaagaaatga 660
agcctctaga atctttagca ctagaggaag cctctggtcc agtcagccaa tcacagaaga 720
gtaagagccg aggcagggct ggcccggatg cagttaccca tgacagtgaa tgggaaatgc 780
tttcaccaca gcctgttcag aaaaacatga tccctgacac ggaaatggag gaggagacag 840
agttccttga gctcggaacc aggatatcaa gaccaaatgg actactgtca gaggatgtag 900
gaatggacat ccccttgaa gagggcgtgc tgagtcccag tgctgcagac atgaggcctg 960
aacctcctaa ttctctggat cttaatgaca ctcatcctcg gagaatcaag ctcacagccc 1020
caaatatcaa tctttctctg gaccaaagtg aaggatctat tctctctgat gataactttg 1080
gacagtccag atgaaattga catcaatgtg gatgaacttg ataccccga tgaagcagat 1140
tcttttgagt accctggccc atgaagaatc ccacagccac aaagattctg gcccaagaag 1200
tcagagtcta tttcnggaat ataccgg 1227

<210> 364
<211> 831
<212> DNA
<213> Homo Sapiens

<400> 364
ctgacatcta caccgaggtc cgcgagctgg tgagcctcaa gcaggagcag caggctttca 60
aggaggcggc ccgacacgga gcggctcgcc ctgcaggccc tcacggagaa gcttctcagg 120
tctgaggagt ccgtctcccg cctcccggag gagatccgga gactggagga agagctccgc 180
cagctgaagt ccgattccca cgggccgaag gaggacggag gcttcagaca ctcggaagcc 240
tttgaggcac tccagcaaaa gagtcaggga ctggactcca ggctccagca cgtggaggat 300
ggggtgctct ccatgcaggt ggcttctgcg cgccagaccg agagcctgga gtccctcctg 360
tccaagagcc aggagcacga gcagcgcctg gccgccctgc aggggcgcct ggaaggcctc 420
gggtcctcag aggcagacca ggatggcctg gccagcacgg tgaggagcct gggcgagacc 480
cagctggtgc tctacggtga cgtggaggag ctgaagagga gtgtgggcga gctccccagc 540
acccgtggaa tcactccaga aggtgcagga acaggtgcac acgctgctca gtcaggacca 600
agcccaggcc cgccgtctgc cttctcagga ctttctggac agactttctt ctctagacaa 660
cctgaaagcc tcagtcaggc cagtggaagc cggacttgaa aatgctcaag aactgctgtg 720
gacaagttgg gtgcataact cggtcaaaat tagaaaccaa cgagnacaat tttggaatca 780
agcccanggt tactagatga ccttggggaa tgatcnggat aggttgtttg t 831

<210> 365
<211> 785
<212> DNA
<213> Homo Sapiens

<400> 365
acttgaaatc tgccagccag acaggatttc tgaggttaat ctgcttctgt taatcctcaa 60
tttaagcctt tatcattttt ctctgactag agacatccat gaaaagccac ctgttattca 120
caggggctgc gcttcaggaa accaaccaaa tgcagaagca gagaacttaa atattgtaaa 180
taagttaact gggcatgaaa atacaatgcc ttggtgttca ggtggtgaca actgctcttt 240
aagaggggac aagaaattgg ggggtagggg acacatggga aaaaaccaca catttttgg 300
tcatgagaaa ttggacttta aatccgcgcc ctgcacacgc aattcattta gacctttcg 360
tgaatcttct ccactttcac aaacaaccta tccagatcat tcctcaggtc atctagtaaa 420
cccttggctg attccagatt gttctcgttg gtttctattt tgaccgagta tgcaaccaaa 480
ctgtccacag cagtcctgag cattttcaag tccgcctcca cttggctgac tgaggctttc 540
aggttgtcta gagaagaaag tctgtccagg aagtcctgag gaggcagacg ggcggcctgg 600

gcttggtcct gactgagcag cgtgtgcacc tgctcctgcc ctttctggga gtgattccac 660
ggtgctgggg agctngccca cacttcctct tcagcttctt ccacgtcacc cgtaaaagca 720
cccagctggg tctcgnccaa gcttcntacc gtgctgggcc aggcccatcc tggnctggct 780
tttga 785

<210> 366
<211> 816
<212> DNA
<213> Homo Sapiens

<400> 366
gtcagccagc ctccttaaat gaaagaaaag gtctctctgc agagaaaatg tcttctaaag 60
gcgatacgag atcatctttt gaaagccctg cacaagacca gagttggatg ttcttgggcc 120
atagtgaggt tggtgatcca tcactggatg ccagggactc agggcctggg tggtctggca 180
agactgtgga gccgttctct gaactcggct tgggtgaggg tccccagctg cagattctgg 240
aagaaatgaa gcctctagaa tctttagcac tagaggaagc ctctggtcca gtcagccaat 300
cacagaagag taagagccga ggcagggctg gcccggatgc agttacccat gacagtgaat 360
gggaaatgct ttcaccacag cctgttcaga aaaacatgat ccctgacacg gaaatggagg 420
aggagacaga gttccttgag ctcggaacca ggatatcaag accaaatgga ctactgtcag 480
aggatgtagg aatggacatc ccctttgaag agggcgtgct gagtcccagt gctgcagaca 540
tgaggcctga acctcctaat tctctggatc ttaatgacac tcatcctcgg agaatcaagc 600
tcacagcccc aaatatcaat ctttctctgg accaaagtga aggatctatt ctctctgatg 660
ataactttgg acagtccaga tgaaattgac atcaatgtgg atgaacttga tacccccgat 720
gaagcagatt cttttgagta ccctggccca tgaagaatcc cacagccaca aagattctgg 780
cccaagaagt cagagtctat ttcnggaata taccgg 816

<210> 367
<211> 803
<212> DNA
<213> Homo Sapiens

<400> 367
aaaagaacca tggaagttct cctgaacagg tagtgaggcc aaaagttaga aaactgataa 60
gttcaagcca ggtggaccaa gaaacaggtt ttaataggca tgaggcgaaa caaagaagtg 120
ttcaaagatg gagagaggct ttggaagttg aggaaagtgg ctcagatgac ctcttaataa 180
aatgtgaaga atatgatgga gagcatgact gtatgttctt ggatccacca tactcaagag 240
ttattacaca aagggaaaca gaaaataacc aaatgacatc agaaagtgga gccacagcag 300
gaaggcaaga agtggataac acctttgga atggctgtgg agattattac caactctatg 360
acaaagatga agatagttct gaatgcagtg atggggaatg gtctgcttct ttgcctcatc 420
gattttctgg tacagaaaaa gatcaatcct caagtgatga aagctgggag actctgccag 480
gaaaagatga gaatgaacct gagctacaaa gtgatagcag tggccctgaa gaagaaaacc 540
aagaattatc tcttcaggaa ggggaacaga catccttgga agagggagaa attccttggt 600
tacagtacaa tgaagtcaat gaaagcagca gtgatgaagg gaaatgaacc tgccaatgaa 660
tttgcacagc cagctttcat gttggatggt aacaataacc tggangatga cttccgtgtg 720
aagtgaagac ttagatgtgg attggagcct attttgatgg ctttgcaaat gggcctagga 780
gttgctggaa gctttttcat aag 803

<210> 368
<211> 809
<212> DNA
<213> Homo Sapiens

<400> 368
attagaaatg accaccgagt atattctgtt tattgtttat gatttacaca gaaaatgatg 60
ggctggggtt atagaacaat aaaccaacca ttacatttag acctgggctt ttgaaaaact 120

tgcattccat tttaacaatt cgtatgtatc taacaaatac ataaatccag atcacaaata 180
atcttaagag ttaaacaatt aagaaacaca aagaatacca catagatcta cctttaaata 240
tcagcattca tattataaga aataagaaaa tgttaaaaaa ataaaattag gttaagtcac 300
aacataaaat agagaaataa gataaatgct attttattaa tattcatact tatttctaat 360
ttaccttcat atagtcttaa ctttttcaaa aggatccaag atatgatcaa ataatatttt 420
agtatctgaa cttgccagcc ttagcttata ccagagcttg ttaccatgaa aatcctaaaa 480
cctcaatttt ctttttcttt tttaaaattt aagccaactc ttattcaact tttcttcttc 540
acagcagctg tttatagata gtagggagcc aagaatgaag gacagtaaca gatggaaagc 600
aaaaagtaca acagctatct taagttcagc tctcaacatt gctggttgag tttggaaccc 660
aaaaccctct taacaactgg cagataatag cttaaatctt tacaggccaa ggaagaaata 720
ttttctttgg ggacagctgn tatctagaag aaaacccang ggccctttaa tataggccta 780
aaatattaan gggnggcttt aattttagg 809

<210> 369
<211> 826
<212> DNA
<213> Homo Sapiens

<400> 369
gtgaagaccc tgagtccgtt tatttgccgg taggagcagg ctccaacatt ttgtctccat 60
caaacgttga ctgggaagta gaaacagata attctgattt accagcaggt ggagacatag 120
gaccaccaaa tggtgccagc aaggaaatac cagaattgga agaagaaaaa acaattccta 180
ccaaagagcc tgagcagata aaatcagaat acaaggaaga aagatgcaca gagaagaatg 240
aagatcgtca tgcactacac atggattaca tacttgtaaa ccgtgaagaa aattcacact 300
caaagccaga gacctgtgaa gaaagagaaa gcatagctga attagaattg tatgtaggtt 360
ccaaagaaac agggctgcag ggaactcagt tagcaagctt cccagacaca tgtcagccag 420
cctccttaaa tgaaagaaaa ggtctctctg cagagaaaat gtcttctaaa ggcgatacga 480
gatcatcttt tgaaagccct gcacaagacc agagttggat gttcttgggc catagtgagg 540
ttggtgatcc atcactggat gccagggact cagggcctgg gtggtctggc aagactgtgg 600
agccgttctc tgaactcggc ttgggtgagg gtccccagct gcagattctg gaagaaatga 660
acctctagaa tctttagcac tagangaagc ctntggtcca gtcagcccat cacaggaaga 720
gttagaaccc gaggcanggc tgggcccgga tgcagtaccc cntgacagtg gaatgggnaa 780
tgcttttanc cacagcctgt tcagaaaaac atgatccttg ccccgg 826

<210> 370
<211> 783
<212> DNA
<213> Homo Sapiens

<400> 370
gcagaatcaa tttttatttc tgaattatac agtgaggcta tatagatata ttgtgtcatt 60
aaagactttt atattattaa tctacattat ggagaattta tttaccaaaa cgaagtctaa 120
cagacacttt attctgagca atccaatgca tgatagaaaa acctttagat atataaaaga 180
ttaatttgtg cacatctaaa tgtttctaag ggaacaaact actgaggcat tgtgataaga 240
cgagagttgc aaacatagta ccataactga atatttaaaa ttacatctta acaaaggcta 300
ggagtagtga cttcctcaca cacctcagag aatgtcttag agagtaaccc catagaacat 360
tgtatggctt caacagaaac ttcaggattt tcttccacac tgagctactg ccctcaaaca 420
aactttctca ctccttgaca ctatcttctg tgcaaatttc tgttctttct cttaatcaag 480
gagctttgag aaacaatgct tttgccccaa tgacccctg gttcccttaa ctacagatct 540
ataggagaaa tgcaaagcag ttcccagaag tcagaaccaa agcaagaatg ttcagagtgc 600
aagagctaga gagctaaatc atgtgaatgg ttacctctgn ctacctatct gcttanggat 660
tatttttcta nggattcatc taggattcta tttaccttgg gggtgaaatg gacatggtag 720
cttttcctta gccccatgcc aattaaaatt naatttgggc ntttaaagaa taattaaaat 780
tgc 783

<210> 371
<211> 793
<212> DNA
<213> Homo Sapiens

<400> 371
ccacactgca ggatctgtct tcttctaaag aaccttctaa ttccctaaac ttacctcaca 60
gtaatgagct gtgttcatcc cttgtgcatc ccgaattgag tgaggtcagt tctaacgttg 120
caccaagcat ccctccagta atgtcaagac ctgttagctc ttcctccatt tccactccct 180
tgcccccaaa tcaaataact gtatttgtca cttccaatcc catcacaact tcagctaaca 240
catcagcagc tttgccaact cacttgcagt ctgcattgat gtcaacagtt gtcacaatgc 300
ccaatgcggg tagcaaggtt atggtttctg agggacagtc agctgctcag tctaatgccc 360
ggcctcagtt cattacacct gtctttatca attcatcctc aataattcag gttatgaaag 420
gatcacagcc aagcacaatt cctgcagccc cactgacaac caactctggc ctgatgcctc 480
cctctgttgc agttgttggc cctttacaca tacctcagaa cataaaattt tcttctgctc 540
ctgtaccgcc taatgccctc tccagtagtc ctgctccaaa catccagaca ggtcgacctt 600
tggtccttag ctcacgagcc acccctgttc agcttccttc ccttcttgna cgtcttctnc 660
agttgcccct ctnatcccct gtgcaacaag tgaaagaatt gaatncagat gangctagcc 720
ctnangtgaa caccttaaca gatcagacac tttttccttt tncagtcaac cccaatgggt 780
tcttcccttt tga 793

<210> 372
<211> 804
<212> DNA
<213> Homo Sapiens

<400> 372
cacattgtac aaatccttag attctcttta ttcactggtc catttctaca acaaatacat 60
ccaaaacact atataataaa attatttaca acatttccaa atgagaagat tgcttttgcc 120
cccactactg ctattcacac acagtacttc cacggcacaa tacattagga gatctaaaaa 180
tgctcaccct gtactctagg ctgcttagga aatgtgaaaa ctagtaacat ttataatggc 240
attagctcct ttcaatacaa gacaacattt tagaaacctt gaacttcaac tcgcaacacc 300
aaaagggctc aacagtcctg ctttccccat tgcactttat gaaacaggtt gcagggacta 360
ggaaaagggc cacattatta aaattactaa ctgtacagaa attgatttaa aaaagtcaca 420
gctcaaaatt gctctttgta aaagtcacac acatttccaa gtatcaagtc gcagtcctgc 480
ttgtttactt ggattttctt cgcttggatt gcaccgcact ggttatgtct ttagtagagc 540
tggaggctga agcaggtcga gaagatcgtt tacgatgtcc attttccaca ctttcagagg 600
ccacagttgg ctcttcagtt cgggagtttc ttcggcctgg gatttggact tttcaactat 660
ctctttgggc tcactgcttt gtccagagac tatggcagca tttacctccg ctttgggctg 720
gcaacagang cctgcaatgc tgngggttga agttcctttt gagactaaat tctggcgacn 780
gggctttgct gggggtaaag ttct 804

<210> 373
<211> 792
<212> DNA
<213> Homo Sapiens

<400> 373
gccggccgcc cgcgcccgcc cgccgctgcc cccagctcga ggaggacatc gcggccaagg 60
agaagttgct gcgggtgtcg gaggacgagc gggaccgggt gctggaggag ctgcacaagg 120
cggaggacag cctcctggcc gccgaagagg ccgccgccaa ggctgaagcc gacgtagctt 180
ctctgaacag acgcatccag ctggttgagg aagagttgga tcgtgcccag gagcgtctgg 240
caacagcttt gcagaagctg gaggaagctg agaaggcagc agatgagagt gagagaggca 300
tgaaagtcat tgagagtcga gcccaaaaag atgaagaaaa aatggaaatt caggagatcc 360
aactgaaaga ggcaaagcac attgctgaag atgccgaccg caaatatgaa gaggtggccc 420

gtaagctggt catcattgag agcgacctgg aacgtgcaga ggagcgggct gagctctcag 480
aaggccaagt ccgacagctg gaagaacaat taagaataat ggatcagacc ttgaaagcat 540
taatggctgc agaggataag tactcgcaga aggaagacag atatgaggaa gagatcaagg 600
tcctttccga caagctgaag gaggctgaga ctcgggctga gttttgcgga aaaggtcagt 660
aactaaantt ggagaaaaag catttgatga cttagaagaa gaaagtggct tcatgcccaa 720
agaagaaaan cttatatgca tcaanatgct ggatcagact ttactggagt taaaccacat 780
gtgaaaaact tc 792

<210> 374
<211> 745
<212> DNA
<213> Homo Sapiens

<400> 374
agccgataac agtagaactc tgaacgtgga ttccactgca atgacactac ctatgtctga 60
tccaactgca tgggccacag caatgaataa tcttggaatg gcaccgctgg gaattgccgg 120
acaaccaatt ttacctgact ttgatcctgc tcttggaatg atgactggaa ttccaccaat 180
aactccaatg atgcctggtt tgggaatagt acctccacca attcctccag atatgccagt 240
agtaaaagag atcatacact gtaaaagctg cacgctcttc cctccaaatc caaatctccc 300
acctcctgca acccgagaaa gaccaccagg atgcaaaaca gtatttgtgg gtggtctgcc 360
tgaaaatggg acagagcaaa tcattgtgga agttttcgag cagtgtggag agatcattgc 420
cattcgcaag agcaagaaga acttctgcca cattcgcttt gctgaggagt acatggtgga 480
caaagccctg tatctgtctg gttaccgcat tcgcctgggc tctagtactg acaagaagga 540
cacaggcaga ctccacgttg atttcgcaca ggctcgagat gacctgtatg agtgggagtg 600
taaacagcgt atgctagcca gagaggagcg ccatcgtaga agaatggaag aagaaagatt 660
gcgtncacca tnttcacccc cagtggtcac tatttagatc atgaatgcag cattggtgct 720
gaaaaaataa aaggaggatt ccaaa 745

<210> 375
<211> 734
<212> DNA
<213> Homo Sapiens

<400> 375
gaggtataaa aaggaatatt tatcttttaa aaatacaact ttgaacacta ctggcatctc 60
atttacaaag tatttttgtg aaatactctc cattggcttt gcttgctcag tacattcttt 120
tatcttcaat tgagactcaa gggagggtat gcttgcatta ttataaatac cacaaccacc 180
accacacaca ataaagacca tctctgcctc aggacattcg ccccaaacct ccatcctctc 240
tgtttacttt ccaccaagca gaagtttctg aatggtccac tcacatgctg ccattgcgat 300
ttgccgatgg gcactaccaa ggtgtctctg gcaattcgca ctccaggtgg agctgaccta 360
tttgtagaaa gcctcacaaa ccctagctca ttatttattc attgattcat tactattaat 420
acttatatca agtctttgca aacattcagc atgaagtaaa catagtattt acagcagtac 480
tcggtttgca attcaacaca ctgacaacag aagcaaaggg accaacagac tgtaagaagg 540
ccagagggga aagaatatta atataaatcc cttctgccac tgtgtgccgt gccgtgtgtg 600
tgtttgtgcg tgtgtgccca cacatgagca tattttaatt cacagaaaaa ctgaaacatg 660
ccctccttta aaagcagact atttacaagt gattctgaat agcatgaaca catgccagnc 720
atactggaaa cttg 734

<210> 376
<211> 822
<212> DNA
<213> Homo Sapiens

<400> 376
ggctgatcag tgttctagaa cagatcagac attttgtaat gatgcctgaa ataaacacta 60

accacctcga caagcaacag gttcaactcc tggcagagat gtgtatcctt attgatgaaa 120
atgacaataa aattggagct gagaccaaga agaattgtca cctgaacgag aacattgaga 180
aaggattatt gcatcgagct tttagtgtct tcttattcaa caccgaaaat aagcttctgc 240
tacagcaaag atcagatgct aagattacct ttccaggttg ttttacgaat acgtgttgta 300
gtcatccatt aagcaatcca gccgagcttg aggaaagtga cgcccttgga gtgaggcgag 360
cagcacagag acggctgaaa gctgagctag gaattccctt ggaagaggtt cctccagaag 420
aaattaatta tttaacacga attcactaca aagctcagtc tgatggtatc tggggtgaac 480
atgaaattga ttacattttg ttggtgagga agaatgtaac tttgaatcca gatcccaatg 540
agattaaaag ctattgttat gtgtcaaagg aagaactaaa agaacttctg aaaaaagcag 600
cccagtggtg aaattaagat aacgccatgg tttaaaatta ttgcagcgac ttttctcttt 660
aaatggtggg ataacttaaa tcatttgaat caagtttggt gacccatgag aaaatatacn 720
gaatggggaa tatgtaggta aatggattac ccgaaaaaan ttatctgntt aacaaactta 780
gaaaggcttt ttnccttta aattaagttc tatcattaaa tt 822

<210> 377
<211> 812
<212> DNA
<213> Homo Sapiens

<400> 377
gcaagaaata aatttttatt tttcttcatt atcatacagc atttaagaat aataaatctg 60
tcttgaggtt tcaaatctga gatatctatg gcaagtttat aaaaagtaca ttgatcaagg 120
tacaattttt aacattaata tacacattcc ataatctcat ctatttaaca ttaacacagg 180
cctttgttgt tgttatttt ttctccctac aatatttcct gactctgtag gacagtggtc 240
ctcagttggg ggttgactct gtcccctagg ggcatctggc aacatccggc ataactgtgg 300
gtgtcacatg agagggacgc tgctcaccat cctgcaatgc acagcacaga ccccaccaca 360
ggggttttat ccagcccaaa tgtcaacagt gtcaagttta agcaactctt accgagtggg 420
actcaattcc cattttatga acacctctgt gctcactgta attctgaaaa cacagacttt 480
gctaactggt aaatactatt tacaagaaga ttcaacctaa tcaatatcac ttatcaaaag 540
cagtggctga ctgtaagtat caacatgttt ccagaatgaa taaaccacac aatcaactca 600
gaatgataca aattagggtc catatcattt aatttccctt gaacctgctc tgctaggtta 660
atctgctaat atgaaagtta attaagactg gttttgaagg accgaggaca atagtttcct 720
ttgcacaatt ttctgaacta tgagaaaaat ttaaaggatc cntaaagcnc ctggcaaaaa 780
gccaaggccc tttgcaaagg gcttccggaa aa 812

<210> 378
<211> 870
<212> DNA
<213> Homo Sapiens

<400> 378
aaaatttaag ccaactctta ttcaactttt cttcttcaca gcagctgttt atagatagta 60
gggagccaag aatgaaggac agtaacagat ggaaagcaaa aagtacaaca gctatcttaa 120
gttcagctct caacattgct ggttgagttt ggaaccaaaa cctcttaaca actggcagat 180
aatagctaaa tcttaacaga caaagaagaa atattttctt tgggacagct gctatctaga 240
agaaaaccaa ggtcccttaa tatagtctaa atataatgtg tggcttatta tagagaaatc 300
tttagcaacg taagtttaac cagtaagtgt cacaactgat caacagtact taaaaggaaa 360
caaacaaaaa tcacactagc cacaaatttc caccatatac acatgaaatt aattttaatc 420
tgttttgact ccttgacact aactgatcat taatgaaata tgatatggaa agatcacaga 480
gtagaaaaca agcaaagatt agtttataca acagtgacta tatacatcag agggaaaaca 540
tgctagctaa tgcaacatta aggcctgaat gtaagcattt cccaagtcac agaagcccca 600
aagaactcct aaattacaaa ttcatcacat tacatgcatg caatggtcac ttttggttta 660
cccataaaag gatacncagt attttgctgn aaataccagg accacattta caatatatgc 720
aaaaaattag aatgcagngg taagntcctt anatttaagc cctcatatgn gncaacaggg 780
gaaaattcca tttatttta agaaaggaaa aanggagacn gggatataaa tactcggaga 840

aattccccga attaagaagn aacctctgca 870

<210> 379
<211> 837
<212> DNA
<213> Homo Sapiens

<400> 379
gaggagaggt caaccgtcgt agcgccaata acttctactc catgatccag tcggccaaca 60
gccatgtccg ccgcctggtg aacgagaaag ctgcccatga gaaagatatg gaagaagcaa 120
aggagaagtt caagcaggcc ctttctggaa ttctcattca atttgagcag atagtggctg 180
tgtaccattc cgcctccaag cagaaggcat gggaccactt cacaaaagcc cagcggaaga 240
acatcagcgt gtggtgcaaa caagctgagg aaattcgcaa cattcataat gatgaattaa 300
tgggaatcag gcgagaagaa gaaatggaaa tgtctgatga tgaaatagaa gaaatgacag 360
aaacaaaaga aactgaggaa tcagccttag tatcacaggc agaagctctg aaggaagaaa 420
atgacagcct ccgttggcag ctcgatgcct accggaatga agtagaactg ctcaagcaag 480
aacaaggcaa agtccacaga gaagatgacc ctaacaaaga acagcagctg aaactcctgc 540
aacaagccct gcaaggaatg caacagcatc tactcaaagt ccaagaggaa tacaaaaaga 600
aagaagctga acttgaaaaa ctcaaagatg acaagttaca ggtggaaaaa atgttggaaa 660
atcttaaaga aaaggaaagc tgtgcttcta ngctgtgtgc ctcaaaccag gatagcgaat 720
accctnttga gaaagaccat gaacagcagt cctatcaaaa tcttgaaccg tgaagcactg 780
gttagtgggg gattatcttc cacanttcct tcatggtcac cccatttgga gccagcc 837

<210> 380
<211> 793
<212> DNA
<213> Homo Sapiens

<400> 380
gttgcttagt ttcaggagtt ctctacatat tctggatatt aattcctttt catatatatg 60
atttgcaaat attttctccc attctgtggg gtttttttac tttgttgata ttgtcttttg 120
agacacaatt ttttttaatt ttcatgaagt ccaatttgtc tatttttttt cttttgttgc 180
ctattttgtg tcatcctcaa gaaaccatta ccaaatccag tgttttgaag ctttccccat 240
atgttttatt ctaagagcct tatggtttta ggccttacat ttaggccttt gatccatttt 300
gagttaattt ttgtatatgg tgttaggtaa ggacccaact tccttgtttg gcatgtggat 360
atccaatttt cctaccacca tttgtttgaa aagattgtcc tttccccatt gaatggtctt 420
ggtagccttg tcaaaagtca actgatcata catcttattt atttccggcc tccctaatct 480
attctatcag actatatgtc tgtctttatg ccagtaccac attgttttga ttactgttag 540
tccatcttta ttatataaaa tcatgattac aagctcatac tataatatta tattttatac 600
ttttccaaat cttccatagc attgngttct tcttccacta aaaagcagac cgtttagagg 660
tataataagt agcctgaagt gggcaagtaa tgaaacaaac ttgagaatta cataaccttn 720
cagctataga gttcataatg gcccgaaagg gtaaagactg caggncgctt aattnccagg 780
cttttcacca ggc 793

<210> 381
<211> 807
<212> DNA
<213> Homo Sapiens

<400> 381
agaacaccct cttagatgtc ttgttctgtg tgcccaagta catgccggaa tgtggagaag 60
aaatgggttc tctctagtaa accagattta ttactaccat aatgtgaaat gcagacgtga 120
gatgtttgac aaggatgtag taatgcttca gacaggtgtc tccatgatgg atccaaatca 180
tttcctgatg atcatgctca gccgctttga actttatcag attttcagta ctccagacta 240
tggaaaaaga tttagttctg agattaccca taaggatgtt gttcagcaga acaatactct 300

aatagaagaa atgctatacc tcattataat gcttgttgga gagagattta gtcctggagt 360
tggacaggta aatgctacag atgaaatcaa gcgagagatt atccatcagt tgagtatcaa 420
gcctatggct catagtgaat tggtaaagtc tttacctgaa gatgagaaca aggagactgg 480
catggagagt gtaatcgaag cagttgccca tttcaagaaa cctggattaa caggacgagg 540
catgtatgaa ctgaaaccag aatgtgccaa agagttcaac ttgnatttct atcacttttc 600
aagggcagaa cagtccaagg cagaagaagc gcaacggaaa ttgaaaagac naaatagaga 660
agatacagca cttccacctt ccgggggttgn ctncattctg gcctctggtt gcaagcctgg 720
gtaacanttt gcagtcagat gtcatggtgn gcatcatggg gaaccaattn tgcaatgggc 780
tgtggaacca taaanggata tgcctgg 807

<210> 382
<211> 800
<212> DNA
<213> Homo Sapiens

<400> 382
aagtttaaat aaagaattta tttccaaatt cagcagaact tctttctttc ttaaaaagcc 60
aactgggtta aaaaaatcca agtttgtgtt ttttggtggt gcaataatta taaatgttgc 120
cagtcaatgc caaccagtgt ctgattggct tcctgtgcat gtccaatttc ctctgtgaca 180
ctgtgttggt gccagagctt ctgaatcttc ttgaatcgct ctttgcataa atgtaaagga 240
tttccccgtc tgagtccctg gtcggtctcc ccatagtcat caaggtaagg aggagaataa 300
aaacagcctt tggttttgcc agctaaaaat agcacctgac attcccgtac tctcaggaag 360
atgcccactc cagagccaca ggagtaggtg tgagctgtgc aggctcctac atcctcccct 420
tccagttcag tctggcagca gtaactctgg gagcacagca gagatccgca cacaaggcac 480
agagttgggg ctctgctctt atcaccacct gatttcgggc acgagaaatt ggatgcttga 540
ttaatgaggc tgctgtaatc ctctggaagg tttattaatt tgttaagatt ctcttggata 600
tcttatagca tctcttttca ccttctagaa atcttttaac tttcactggt accggcacca 660
acntttcaat cagggaattc antatctcac tattttcttt gaaaaaggca aatggaggtt 720
ggtttgggta agggaaagga aaggcttccn taaaaggttc aaaaagggct tngttnccag 780
gnaaccttgn aatgtcgggt 800

<210> 383
<211> 1203
<212> DNA
<213> Homo Sapiens

<400> 383
ctgacatcta caccgaggtc cgcgagctgg tgagcctcaa gcaggagcag caggctttca 60
aggaggcggc ccgacacgga gcggctcgcc ctgcaggccc tcacggagaa gcttctcagg 120
tctgaggagt ccgtctcccg cctcccggag gagatccgga gactggagga agagctccgc 180
cagctgaagt ccgattccca cgggccgaag gaggacggag gcttcagaca ctcggaagcc 240
tttgaggcac tccagcaaaa gagtcaggga ctggactcca ggctccagca cgtggaggat 300
ggggtgctct ccatgcaggt ggcttctgcg cgccagaccg agagcctgga gtccctcctg 360
tccaagagcc aggagcacga gcagcgcctg gccgccctgc aggggcgcct ggaaggcctc 420
gggtcctcag aggcagacca ggatggcctg gccagcacgg tgaggagcct gggcgagacc 480
cagctggtgc tctacggtga cgtggaggag ctgaagagga gtgtgggcga gctccccagc 540
acccgtggaa tcactccaga aggtgcagga gcaggtgcac acgctgctca gtcaggacca 600
agcccaggcc gcccgtctgc ctcctcagga cttcctggac agactttctt ctctagacaa 660
cctgaaagcc tcagtcagcc aagtggaggc ggacttgaaa atgctcagga ctgctgtgga 720
cagtttggtt gcatactcgg tcaaaataga aaccaacgag aacaatctgg aatcagccaa 780
gggtttacta gatgacctga ggaatgatct ggataggttg tttgtgaaag tggagaagat 840
tcacgaaaag gtctaaatga attgcgtgtg cagggcgcgg atttaaagtc caatttctca 900
tgaccaaaaa atgtgtggtt ttttcccatg tgtcccctac cccccaattt cttgtcccct 960
cttaaagagc agttgtcacc acctgaacac caaggcattg tattttcatg cccagttaac 1020
ttatttacaa tatttaagtt ctctgcttct gcatttggtt ggtttcctga agcgcagccc 1080

ctgtgaataa caggtggctt ttcatggatg tctctagtca gagaaaaatg ataaaggctt 1140
aaattgagga ttaacagaag cagattaacc tcagaaatcc tgtctggctg gcagatttca 1200
agt 1203

<210> 384
<211> 2651
<212> DNA
<213> Homo Sapiens

<400> 384
cctggctgca gagtacccca ccagcgcggt tcatagtggc gtcatgcacg cagactcctg 60
caagttcccc taagttctta gaggactgct ttgccttttg atctgagagt tgcaaagttc 120
cataaagaat ggcccttgtg gataagcaca aagtcaagag acagcgattg gacagaattt 180
gtgaaggtat ccgcccccag atcatgaacg gcccccctgca cccccgcccc ctggtggcgc 240
tgctggacgg ccgcgactgc actgtggaga tgcccatcct gaaggacctg gccactgtgg 300
ccttctgtga cgcgcagtcg acgcaggaaa tccacgagaa ggttctaaac gaagccgtgg 360
gcgccatgat gtaccacacc atcaccctca ccagggagga cctggagaag ttcaaggccc 420
tgagagtgat cgtgcggata ggcagtggct atgacaacgt ggacatcaag gctgccggcg 480
agctcggaat tgccgtgtgc aacatcccgt ctgcagccgt ggaagagaca gcggactcta 540
ccatctgcca catcctcaac ctgtaccgga ggaacacgtg gctgtaccag gcactgcggg 600
aaggcacgcg ggttcagagc gtggagcaga tccgcgaggt ggcctcggga gcggcccgca 660
tccgtgggga gacgctgggc ctcattggct ttggtcgcac ggggcaggcg gttgcagttc 720
gagccaaggc ctttggattc agcgtcatat tttatgaccc ctacttgcag gatgggatcg 780
agcggtccct gggcgtgcag agggtctaca ccctgcagga tttgctgtat cagagcgact 840
gcgtctcctt gcactgcaat ctcaacgaac ataaccacca cctcatcaat gactttacca 900
taaagcagat gaggcaggga gcattccttg tgaacgcagc ccgtggcggc ctggtggacg 960
agaaagcctt agcacaagcc ctcaaggagg gcaggatacg aggggcagcc ctcgacgtgc 1020
atgagtcaga gcccttagc tttgctcagg gtccgttgaa agatgcaccg aatcttatct 1080
gcactcctca cactgcctgg tacagcaagc aggcgtcact ggagatgagg gaggcagctg 1140
ccactgagat ccgccgagcc atcacaggtc acatcccaga aagcttaaga aactgtgtga 1200
acaaggaatt atctgtcaca tcagcgcctt ggtcagtaat agaccagcaa gcaattcatc 1260
ctgagctcaa tggtgccaca tacagatatc cgccaggcat cgtgggcgtg gctccaggag 1320
gacttcctgc agccatggaa gggatcatcc cctgnaaggc atcccagtga ctcacaaccc 1380
tcccgacagt ggcacatcct ttcccaaggg ccttntccca accagcccac aaaacacggg 1440
gccaatcgag agcaccccaa cgagcaatag cagagaatgc cagaaggtaa tcactcagat 1500
acacttggga ccaagagnca gtgaaaaata gatgaactaa gagaaaaaga atcggatggt 1560
ctttgtaact tgattctgga catatgcatc attgatgttg cagtgttgaa actacaagag 1620
ctagaaaact gaagatgtcg tctgcttacg gaagcgctga aagactagga tgtgatttat 1680
taacgaccaa cttctgttat tgtgtgttaa gtttttcatc tgtgcatcaa atcacaaaaa 1740
gaataaatag agcttttttcc tttatcagtc ccttgggcac agcaggtcct gaacaccctg 1800
ctctacaatg ttgcatcaag agttcaaaca acaaaataaa aaatattaag aggaaatccc 1860
catcctgtga cttgagtccc ttaagtctac aggggctggt gacctctttt tgctaatagg 1920
aaaatcacat tactacaaaa tggggagaaa actgtttgcc tgtggtagac acctgcacgc 1980
ataggattga agacagtaca ggctgctgta cagagaagcg cctctcacat ctgaactgca 2040
tactgagcgg gcaagtcggt tgtaagttca gtaaaaccct ctgatgatgc aaaaaaaaaa 2100
aaaaagtatt aagtttcaca agctgtttgt actcaaatat attttctcag tttcagatcc 2160
tctgctattt tattgagtgg aaagtcttga gctaaaaggg ttcaagaaga ataatgttgc 2220
atttccttat gtctcaggaa acacttttta tggtaacttg tcagattgtc tatgaacaaa 2280
cccacttttt tagacattga taaagtcttc ttcacgtgat attttataca agaacacttc 2340
agatgtatta gatgtgactg atttttaacaa atcctattag atttgtatca actagttaca 2400
tgttctattc atagtctttt gtgaatcatt gccttttttgt ttaaaaagat ggcctatttt 2460
gagcctttgt ataggtacat tcctgttttt gtgacaaaag aaaaacttta aaattgtccc 2520
aaacagaaaa ataatggcta tcagaagtat gttttgtttt agtgtgagtt accgttactg 2580
tatttgttta ttgtaaaggt ggacatttag cgttcagtgc agttttcaat aaaaagtaat 2640
taaaatttgt t 2651

<210> 385
<211> 804
<212> DNA
<213> Homo Sapiens

<400> 385
cctggctgca gagtacccca ccagcgcggt tcatagtggc gtcatgcacg cagactcctg 60
caagttcccc taagttctta gaggactgct ttgccttttg atctgagagt tgcaaagttc 120
cataaagaat ggcccttgtg gataagcaca aagtcaagag acagcgattg gacagaattt 180
gtgaaggtat ccgcccccag atcatgaacg gccccctgca cccccgcccc ctggtggcgc 240
tgctggacgg ccgcgactgc actgtggaga tgcccatcct gaaggacctg gccactgtgg 300
ccttctgtga cgcgcagtcg acgcaggaaa tccacgagaa ggttctaaac gaagccgtgg 360
gcgccatgat gtaccacacc atcaccctca ccagggagga cctggagaag ttcaaggccc 420
tgagagtgat cgtgcggata ggcagtggct atgacaacgt ggacatcaag gctgccggcg 480
agctcggaat tgccgtgtgc aacatcccgt ctgcagccgt ggaagagaca gcggactcta 540
ccatctgcca catcctcaac ctgtaccgga ggaacacgtg gctgtaccag gcactgcggg 600
aaggcacgcg ggttcagagc gtggagcaga tcccgcgagg tggcctcggg agcgggccgc 660
atncgtgggg agacgcttgg gcctcattgg ctttggtccg caccggggca agccggttgc 720
agttcgagcc aaggcctttg gattcagcgc atattttatg accctacttt gcanggatgg 780
gatcgaaccg gtcccntggc cgtg 804

<210> 386
<211> 782
<212> DNA
<213> Homo Sapiens

<400> 386
gcatcatcag agggttttac tgaacttaca accgacttgc ccgctcagta tgcagttcag 60
atgtgagagg cgcttctctg tacagcagcc tgtactgtct tcaatcctat gcgtgcaggt 120
gtctaccaca ggcaaacagt tttctcccca ttttgtagta atgtgatttt cctattagca 180
aaaagaggtc accagcccct gtagacttaa gggactcaag tcacaggatg gggatttcct 240
cttaatattt tttattttgt tgtttgaact cttgatgcaa cattgtagag cagggtgttc 300
aggacctgct gtgcccaagg gactgataaa ggaaaaagct ctatttattc tttttgtgat 360
ttgatgcaca gatgaaaaac ttaacacaca ataacagaag ttggtcgtta ataaatcaca 420
tcctagtctt tcagcgcttc cgtaagcaga cgacatcttc agttttctag ctcttgtagt 480
ttcaacactg caacatcaat gatgcatatg tccagaatca gttacaaaga ccatccgatt 540
ctttttctct tagttcatct atttttcact ggctcttggt cccaagtgta tctgagtgat 600
taccttctgg cattctctgc tattgctcgg tggggtgctc tcgatggccc cgtggtttgn 660
gggctggttg ggaanagggc ncttgggaaa ggaagtgcca ctgtccggaa ggntggtgaa 720
gtcactggga ngcctccagg gatgannccc tttccatggg ntgcaaggaa agncttcctg 780
ga 782

<210> 387
<211> 865
<212> DNA
<213> Homo Sapiens

<400> 387
agattancnn cnggagctcg cgcgcctgca ggtcgacact agtggatcca aagctgtatc 60
agagcgactg cgtctccttg cactgcaatc tcaacgaaca taaccaccac ctcatcaatg 120
actttaccat aaagcagatg aggcagggag cattccttgt gaacgcaccc cgtggtggcc 180
tggtggacga gaaagcctta gcacaagctc tcaaggaggg caggatacga ggggcagccc 240
tctatgtgcg tgagtcggag ccctttagct ttgctcaggg tccgttgaaa gatgcaccga 300
atcttatctg cactcctcac actgcctggt acagcaagca ggcgtcactg gagatgaggg 360
aggcagctgc cactgagatc cgccgagcca tcacaggtca catcccagaa agcttaagaa 420

actgtgtgaa caaggaatta tctgtcacat cagcgccttg gtcagtaata gaccagcaag 480
caattcatcc tgagctcaat ggtgccacat acagatatcc gccaggcatc gtgggcgtgg 540
ctccaggagg acttcctgca gccttggaag ggatcatccc tggaggcatc ccagtgactc 600
acaacctccc aacagtggca catccttccc aggcgccctc tcccaaccag cccacaaaac 660
acggggacaa tcgagagcac ttcaacgagc aatagcagag aatgcccgga aggtaatcat 720
tcagatacat ttgggaccna gagatagtga aaaatgatga acttagagaa aaaggaatat 780
gaaggncttt ggaactggat cttggactta tgcatcattg atgcttgcaa gtggttaaaa 840
ctnccaggag ctttgaaaac tggaa 865

<210> 388
<211> 753
<212> DNA
<213> Homo Sapiens

<400> 388
gagtataang gttaaattct atttaaaaag aaagnccatt aaatcaactt caagttctta 60
nctcatagga ctatttngna ncacttcttt gnaaatatca tttngttagg tnatnggcaa 120
ancagtttca nggttcactt ccctcccttg anccaggncc aggncatttn gctttggggn 180
aaattaaaat canaattcta aaagttganc ancttttgttt tttttnaatn gactnanctn 240
tancccacca ttacaactta nggacggcat gactngataa nganggactt gngtgaggtt 300
ttgagttttc aattaanctt tgnatcacat gaggnaatng ncagcattct tgagncnggt 360
tatggaatag gcagatanaa ccctgtagta ccaanagttg gaaatnggct aatngacaac 420
gcactngcct taaacatctc angtagagaa cttttacatt agngagangt ncttgaattt 480
cananctcac caaattttaa ttacttttta tngaaaactg cagngaangc taaaggtcta 540
cgtttacaat aaacaaatcc agtancagta actcacactg aaccaaanca tacttctgat 600
agccattatt tttcngcttg gggacaattt taaagntttt cttttggccc aaaaaccngg 660
aatgtatccc aaacnaaggc tcaaaagagg cccatcnttt tcaaacaaaa aagggcantg 720
gattcncaaa aanactggng aaatagaaca tgg 753

<210> 389
<211> 737
<212> DNA
<213> Homo Sapiens

<400> 389
aggaaatcca cgagaaggtt ctaaacgaag ccgtgggcgc catgatgtac cacaccatca 60
ccctcaccag ggaggacctg gagaagttca aggccctgag agtgatcgtg cggataggca 120
gtggctatga caacgtggac atcaaggctg ccggcgagct cggaattgcc gtgtgcaaca 180
tcccgtctgc agccgtggaa gagacagcgg actctaccat ctgccacatc ctcaacctgt 240
accggaggaa cacgtggctg taccaggcac tgcgggaagg cacgcgggtt cagagcgtgg 300
agcagatccg cgaggtggcc tcgggagcgg cccgcatccg tggggagacg ctgggcctca 360
ttggctttgg tcgcacgggg caggcggttg cagttcgagc caaggccttt ggattcagcg 420
tcatatttta tgacccctac ttgcaggatg ggatcgagcg gtccctgggc gtgcagaggg 480
tctacaccct gcaggatttg ctgtatcaga gcgactgcgt ctccttgcac tgcaatctca 540
acgaacataa ccaccacctc atcaatgact ttaccataaa gcagatgagg cagggagcat 600
tccttgtgaa cgcagcccgt ggcggcctgg tggacgagaa agccttagca caagccctna 660
agganggcag gatacnaagg ggcaancctt gacgtgcatg agtcaaaanc ctttagcttt 720
tgcttaaggg tccgttg 737

<210> 390
<211> 775
<212> DNA
<213> Homo Sapiens

<400> 390

gcatcatcag agggttttac tgaacttaca accgacttgc ccgctcagta tgcagttcag 60
atgtgagagg cgcttctctg tacagcagcc tgtactgtct tcaatcctat gcgtgcaggt 120
gtctaccaca ggcaaacagt tttctcccca ttttgtagta atgtgatttt cctattagca 180
aaaagaggtc accagcccct gtagacttaa gggactcaag tcacaggatg gggatttcct 240
cttaatattt tttattttgt tgtttgaact cttgatgcaa cattgtagag cagggtgttc 300
aggacctgct gtgcccaagg gactgataaa ggaaaaagct ctatttattc tttttgtgat 360
ttgatgcaca gatgaaaaac ttaacacaca ataacagaag ttggtcgtta ataaatcaca 420
tcctagtctt tcagcgcttc cgtaagcaga cgacatcttc agttttctag ctcttgtagt 480
ttcaacactg caacatcaat gatgcatatg tccagaatca agttacaaag accatccgat 540
tctttttctc ttagttcatc tatttttcac tgnctcttgg tcccaagtgt atctgagtga 600
ttaccttctg gcattctctg ctattgctcg ttggggtgct ctcgattggc cccgtgtttt 660
gtgggctggt tggganaagg cccttgggaa aggatgtgcc actgtcggga gggttgtgag 720
tcactgggat gccttncagg ggatgatccc tttcatggct tggcaggaaa gtctt 775

<210> 391
<211> 776
<212> DNA
<213> Homo Sapiens

<400> 391
gtggataagc acaaagtcaa gagacagcga ttggacagaa tttgtgaagg tatccgcccc 60
cagatcatga acggcccccc gcacccccgc cccctggtgg cgctgctgga cggccgcgac 120
tgcactgtgg agatgcccat cctgaaggac ctggccactg tggccttctg tgacgcgcag 180
tcgacgcagg aaatccacga gaaggttcta aacgaagccg tgggcgccat gatgtaccac 240
accatcaccc tcaccaggga ggacctggag aagttcaagg ccctgagagt gatcgtgcgg 300
ataggcagtg gctatgacaa cgtggacatc aaggctgccg gcgagctcgg aattgccgtg 360
tgcaacatcc cgtctgcagc cgtggaagag acagcggact ctaccatctg ccacatcctc 420
aacctgtacc ggaggaacac gtggctgtac caggcactgc gggaaggcac gcgggttcag 480
agcgtggagc agatccgcga ggtggcctcg ggagcggccc gcatccgtgg ggagacgctg 540
ggcctcattg gctttggtcg cacggggcaa gcggttgcag ttcgagccaa ggcctttgga 600
ttcagcgtca tattttatga cccctacttg caggatggga tcgagccggt ccctgggcgt 660
gcagaaggtc tacaccctgc aggatttgct gtatcagaac cgactgcgtc ttctttcact 720
tgcaatntta acgaacataa ccacccactt tatcaatgga cttttcccta aagcca 776

<210> 392
<211> 909
<212> DNA
<213> Homo Sapiens

<400> 392
aacaaatttt aattactttt tattgaaaac tgcactgaac gctaaatgtc cacctttaca 60
ataaacaaat acagtaacgg taactcacac taaaacaaaa catacttctg atagccatta 120
tttttctgtt tgggacaatt ttaaagtttt tcttttgtca caaaaacagg aatgtaccta 180
tacaaaggct caaaataggc catcttttta aacaaaaagg caatgattca caaaagacta 240
tgaatagaac atgtaactag ttgatacaaa tctaatagga tttgttaaaa tcagtcacat 300
ctaatacatc tgaagtgttc ttgtataaaa tatcacgtga agaagacttt atcaatgtct 360
aaaaaagtgg gtttgttcat agacaatctg acaagttacc ataaaaagtg tttcctgaga 420
cataaggaaa tgcaacatta ttcttcttga acccttttag ctcaagactt tccactcaat 480
aaaatagcag aggatctgaa actgagaaaa tatatttgag tacaaacagc ttgtgaaact 540
taatactttt ttttttttt tgcatcatca gagggtttta ctgaacttac aaccgacttg 600
cccgctcagt atgcagttca naagtganag gcgcttctct gtacagcaac ctggactggc 660
ttcaatccta tgcgtgcagg tgtctaccca gggcnaacag ttttctcccc attttggtag 720
taatggggat tttcctatta gccaaaaaag angtcaccag nccctgnaga cttaaaggga 780
cctcaaggtc nccaggaatg ggggatttcc ctcntaaaaa atttttaatt ttgggggggtt 840
gnaactcttg gangccacca tttgtaaaac cangggttc aagaacctgg ntgggcccca 900

agggacctg 909

<210> 393
<211> 769
<212> DNA
<213> Homo Sapiens

<400> 393
caaattttaa ttacttttta ttgaaaactg cactgaacgc taaatgtcca cctttacaat 60
aaacaaatac agtaacggta actcacacta aaacaaaaca tacttctgat agccattatt 120
tttctgtttg ggacaatttt aaagtttttc ttttgtcaca aaaacaggaa tgtacctata 180
caaaggctca aaataggcca tctttttaaa caaaaaggca atgattcaca aaagactatg 240
aatagaacat gtaactagtt gatacaaatc taataggatt tgttaaaatc agtcacatct 300
aatacatctg aagtgttctt gtataaaata tcacgtgaag aagactttat caatgtctaa 360
aaaagtgggt ttgttcatag acaatctgac aagttaccat aaaaagtgtt tcctgagaca 420
taaggaaatg caacattatt cttcttgaac ccttttagct caagactttc cactcaataa 480
aatagcagag gatctgaaac tgagaaaata tatttgagta caaacagctt gtgaaactta 540
atacttttt ttttttttg catcatcana gggttttact gaacttacaa ccgacttgcc 600
cgctcagtat gccagttcan atgtgaaagg cgcttttntg tcagcagcct gnactggctt 660
caatcctatg cgtgcaggng tttacccaca ggcaaacagg ttttctnccc cattttgga 720
agtaatgggg attttcctat tagcaaaaaa gaaggncacc aanccccctg 769

<210> 394
<211> 813
<212> DNA
<213> Homo Sapiens

<400> 394
ggaagatggc ggagctgcgc gtgctcgtag ctgtcaagag ggtcatcgac tacgccgtga 60
agatccgagt gaagcctgac aggaccggtg tggtcacgga tggtgtgaag cactccatga 120
acccccttctg tgagatcgcg gtggaggagg ctgtgcggct caaggagaag aagctggtga 180
aggaggtcat cgccgtcagc tgtgggcctg cacagtgcca ggagacgatt cgtaccgccc 240
tggccatggg tgcagaccga ggtatccacg tggaggtgcc cccagcagaa gcagaacgct 300
tgggtcccct gcaggtggct cgggtcctgg ccaagctggc agagaaggag aaggtggacc 360
tggtgctgct gggcaaacag gccatcgatg atgactgtaa ccagacaggg cagatgacag 420
ctggatttct tgactggcca cagggcacat tcgcctccca ggtgacgctg gaggggaca 480
agttgaaagt ggagcgggag atcgatgggg gcctggagac cctgcgcctg aagctgccag 540
ctgtggtgac agctgacctg aggctcaacg agccccgcta cgccacgctg cccaacatca 600
tgaaagccaa gaagaagaag atcgaggtga tcaagcctgg ggacctgggt gtggacctga 660
cctccaagct ctctgtgatc agtgtggagg acccgcccca gcgcacggcc ggcgtcaagg 720
tggagaccac tgaggacctg gtggccaagc tgaaggagat tgggcggatt tgagcccctc 780
ccagagatgg caataaaact gactctcaac atc 813

<210> 395
<211> 762
<212> DNA
<213> Homo Sapiens

<400> 395
ggaagatggc ggagctgcgc gtgctcgtag ctgtcaagag ggtcatcgac tacgccgtga 60
agatccgagt gaagcctgac aggaccggtg tggtcacgga tggtgtgaag cactccatga 120
acccccttctg tgagatcgcg gtggaggagg ctgtgcggct caaggagaag aagctggtga 180
aggaggtcat cgccgtcagc tgtgggcctg cacagtgcca ggagacgatt cgtaccgccc 240
tggccatggg tgcagaccga ggtatccacg tggaggtgcc cccagcagaa gcagaacgct 300
tgggtcccct gcaggtggct cgggtcctgg ccaagctggc agagaaggag aaggtggacc 360

tggtgctgct gggcaaacag gccatcgatg atgactgtaa ccagacaggg cagatgacag 420
ctggatttct tgactggcca cagggcacat tcgcctccca ggtgacgctg gaggggggaca 480
agttgaaagt ggagcgggag atcgatgggg gcctggagac cctgcgcctg aagctgccag 540
ctgtggtgac agctgacctg aggctnaacg agcccccgct acgccacgct tgccaacatc 600
atgaaagcca agaagaagaa gatcgangtg atcaacctgg gganctgggt gtggacctga 660
ctccagcttt tttgngatca gtgtgganga ccggcccacg cacgggcgcg tcaangtgga 720
gaccctgagg acctggtggn caactnaaag aaaatgggcg ga 762

<210> 396
<211> 822
<212> DNA
<213> Homo Sapiens

<400> 396
gagagtcagt tttattgcca tctntgggag gggctcaaat ccgcccaatc tccttcagct 60
tggccaccag gtcctcagng gtctccacct tgacgccggc cgtgcgctgg ggcgggtcct 120
ccacactgat cacagagagc ttggaggtca ggtccacacc caggtcccca ggcttgatca 180
cctcgatctt cttcttcttg gctttcatga tgttgggcag cgtggcgtag cggggctcgt 240
tgagcctcag gtcagctgtc accacagctg gcagcttcag gcgcagggtc tccaggcccc 300
catcgatctc ccgctccact ttcaacttgt ccccctccag cgtcacctgg gaggcgaatg 360
tgccctgtgg ccagtcaaga aatccagctg tcatctgccc tgtctggtta cagtcatcat 420
cgatggcctg tttgcccagc agcaccaggt ccaccttctc cttctctgcc agcttggcca 480
ggacccgagc cacctgcagg ggacccaagc gttctgcttc tgctgggggc acctccacgt 540
ggatacctcg gtctgcaccc atggccaggg cggtaccaat cgtctcctgg cactgtgcag 600
gcccacagnt gacggcgatg accttccttc accaagcttt tttctccttt gagccggaca 660
ggcctcttca acgggatctt caccanaaag gggttcatgg gagngcttaa aaccatccgn 720
gaacccaccg gnccttgtna ggctttactt cggatctttn acnggggaat cgatgacccn 780
ttttgacagg tacgaacccc cgccagnttc ggcattttcc tt 822

<210> 397
<211> 812
<212> DNA
<213> Homo Sapiens

<400> 397
gatgttgaga gtcagtttta ttgccatctc tgggaggggc tcaaatccgc ccaatctcct 60
tcagcttggc caccaggtcc tcagtggtct ccaccttgac gccggccgtg cgctggggcg 120
ggtcctccac actgatcaca gagagcttgg aggtcaggtc cacacccagg tccccaggct 180
tgatcacctc gatcttcttc ttcttggctt tcatgatgtt gggcagcgtg gcgtagcggg 240
gctcgttgag cctcaggtca gctgtcacca cagctggcag cttcaggcgc agggtctcca 300
ggcccccatc gatctcccgc tccactttca acttgtcccc ctccagcgtc acctgggagg 360
cgaatgtgcc ctgtggccag tcaagaaatc cagctgtcat ctgccctgtc tggttacagt 420
catcatcgat ggcctgtttg cccagcagca ccaggtccac cttctccttc tctgccagct 480
tggccaggac ccgagccacc tgcaggggac ccaagcgttc tgcttctgct gggggcacct 540
ccacgtggat acctcggtct gcacccatgg ccagggcggt acgaatcgtc tcctggcact 600
gtgcaggccc acaagctgac gggcgatgaa cctccttcac cagcttcttc tccttgagcc 660
cgcacagcct tcttcaccgc gatctcacag gaaggggttc atggagtgct tacaaccatc 720
cggngaccac accgggccct gtcaggcttt aactcggant ctttacgggg taatcgnntg 780
gacctttttg acaagctacc aagcaccccg ca 812

<210> 398
<211> 751
<212> DNA
<213> Homo Sapiens

<400> 398
gatgttgaga gtcagtttta ttgccatctc tgggaggggc tcaaatccgc ccaatctcct 60
ttngcttggc caccaggtcc tcagtggtct ccaccttgac gccggccgtg cgctggggcg 120
ggtcctccac actgatcaca gagagcttgg aggtcaggtc cacacccagg tccccaggct 180
tgatcacctc gatcttcttc ttcttggctt tcatgatgtt gggcagcgtg gcgtagcggg 240
gctcgttgag cctcaggtca gctgtcacca cagctggcag cttcaggcgc agggtctcca 300
ggcccccatc gatctcccgc tccactttca acttgtcccc ctccagcgtc acctgggagg 360
cgaatgtgcc ctgtggccag tcaagaaatc cagctgtcat ctgccctgtc tggttacagt 420
catcatcgat ggcctgtttg cccagcagca ccaggtccac cttctccttc tctgccagct 480
tggccaggac ccgagccacc tgcaggggac ccaagcgtnc tgcttctgct gggggcacct 540
ccacgtggat acctcggtct gcacccatgg ccagggcggt acnnaatcgn ctcctggcac 600
tgtgcaggcc cacaagntga cggggaatga cctccttnac caagcttntt ntccttgacc 660
cgaaaagctt cttcaccgng aacttncaga angggttcaa tggantgctt tacacattcg 720
ggaccacccc cgggccttgt caggctttaa t 751

<210> 399
<211> 800
<212> DNA
<213> Homo Sapiens

<400> 399
agatgttgag agtcagtttt attgccatct ctgggagggg ctcaaatccg cccaatctcc 60
ttcagcttgg ccaccaggtc ctcagtggtc tccaccttga cgccggccgt gcgctggggc 120
gggtcctcca cactgatcac agagagcttg gaggtcaggt ccacacccag gtccccaggc 180
ttgatcacct cgatcttctt cttcttggct ttcatgatgt tgggcagcgt ggcgtagcgg 240
ggctcgttga gcctcaggtc agctgtcacc acagctggca gcttcaggcg cagggtctcc 300
aggcccccat cgatctcccg ctccactttc aacttgtccc cctccagcgt cacctgggag 360
gcgaatgtgc cctgtggcca gtcaagaaat ccagctgtca tctgccctgt ctggttacag 420
tcatcatcga tggcctgttt gcccagcagc accaggtcca ccttctcctt ctctgccagc 480
ttggccagga cccgagccac ctgcagggga cccaagcgtt ctgcttctgc tgggggcacc 540
ttccacgtgg atacctcggt ctgacccatg gccagggcgg tacgaatcgt ctcctggcac 600
tgngcangcc cacaagctga cggcgatgac ctncttnacc agcttcttct ncttgagccc 660
ggacaagnct tcttcaaccg ggatctcaca agaaggggtc atggagtgct ttcacaccat 720
tcgggancac aaccggncct gncaaggctt naacttggac ntttacggng taatccgatg 780
aacccttttt gacagntacc 800

<210> 400
<211> 810
<212> DNA
<213> Homo Sapiens

<400> 400
ggaagactga attgaaagaa gatagctcta gcagtgaagc agaggaagaa gaggaggagg 60
aagatgatga aaaagaaaag gaggataata gcagtgaaga agaggaagaa atagaaccat 120
ttccagaaga aagggagaac tttcttcagc aattgtacaa atttatggaa gatagaggta 180
cacctattaa caaacgacct gtacttggat atcgaaattt gaatctcttt aagttattca 240
gacttgtaca caaacttgga ggatttgata atattgaaag tggagctgtt tggaaacaag 300
tctaccaaga tcttggaatc cctgtcttaa attcagctgc aggatacaat gttaaatgtg 360
cttataaaaa atnctnatnt ggctntgngg agtactgtac atcagccaac attgaatttc 420
agatggcatt gccagagaaa gttgttaaca agcaatgtaa ggagtgtgaa aatgtaaaag 480
aaataaaagt taaggaggaa aatgaaacag agatcaaaga aataaagatg gaggaggaga 540
ggaatataat accaagagaa gaaaagccta ttgaggatga aattgaaaga aaagaaaata 600
ttaagccctc tctgggaagt aaaaagaatt tattagaatc tatacctaca cattctgatc 660
aggaaaaaga agttacatta aaaaaccnga agacaatgaa aatctgggcc gaccaagatg 720
atgacncaac tagggtagat gaatccctca accntaaggt agaactgagg aagaaaaagc 780

caaatctgga tncnatgaat gggattaagc 810

<210> 401
<211> 860
<212> DNA
<213> Homo Sapiens

<400> 401
gggaggcccg cctagccacc ctgaccagcc gtgtagaaga agacagcaac agagattata 60
aaaaactcta tgagagtgct ctgactgaaa accaaaaact gaaaacaaaa cttcaggaag 120
cccagctaga gctagcagat ataaagtcca agcttgagaa ggtggcccag cagaaacaag 180
aaaagacctc tgaccgatca tcagtgctgg agatggagaa acgggagagg cgagccttgg 240
agcgcaaaat gtcagaaatg gaggaagaaa tgaaggtgtt aacagaactg aaatccgaca 300
accagaggct gaaagatgaa aatggtgccc tcatcagagt catcagcaaa ctgtccaagt 360
aggctaggct ccagatttat gaggaaagaa agggacagca tttgctgccc ccacccctct 420
tttccagtcc ttgccttcca accaaaagaa atggatgttt tggtggaagg acacttcttt 480
ctatcaccct cttcagtcac ctctatacac tctacatttt ctctgcactt tcaatgccct 540
gttcttccaa acccctatcc caagttttat gacagtttta attgaagcat gattgtggta 600
attcgagcca tctggagaat gctctgggga gtacaccagg ctcagctgtg gacccctcaa 660
cttcctgctg ctcagctact ttgtccacat tggatttggt ccaaacatgt aagactttct 720
accctnatca gtatccttca gctttttaca ttaacccagt gnccttctga tataggtgaa 780
gtccttgngg gtagccactt tcaggatcct ggaatggggt gcccaagaga aacngccagg 840
atggttgaat tggatcattc 860

<210> 402
<211> 779
<212> DNA
<213> Homo Sapiens

<400> 402
gagatggagt cttgctctgt cacccaggct ggagtgcagt ggcgtgatca aggctcactg 60
caagctccgc ctcccgggtt cacgccattc tcctgcctca gcctcccgag tagctgggac 120
tacaggcgcc cgccaccacg cctggctaat tttttgtatt tttagtagag attgggtttc 180
accgtgttag ccaggatggt ctcgaactcc tgacctcgtg atctgtccac ctcggcctcc 240
tgaagtgctg ggattacagg catgagccac tgcacctggt ggaattggga tcttgaatta 300
cagcttctag tttaaacagc atgtggtgtt tcagagggag gaccatggag agctacatgt 360
catgttagga aagaattaac agacagaggt agtatatatt aagggaatga accactctaa 420
acactgaata tcactggcaa ccctaaaatg atgaggattt aatgacttgc acactcaagt 480
gaaccaaggg ataaaactcc tacaaaaaga aaatactgta agtattaatg ctaggttatc 540
atcaaganct aatggtttaa ttttgcactg gatttgnatt cttttccagg cctggacatg 600
atattttaaa ggctggttnt ggctagagga ggatgggcca anatgtgaca gggangaaaa 660
gcatgcctta tgaggaatga cttaaaggga ctagaggtaa cagcagctca aaagtaagaa 720
ctgaggggga aaacccccca ctgnaccata tntnaagggc cgttaaagaa ttgcagaat 779

<210> 403
<211> 1443
<212> DNA
<213> Homo Sapiens

<400> 403
cttcaggaac tgttaaaaga aaaacaacaa gaagtaaagc agctacagaa ggactgcatc 60
aggtatcaag agaaaattag tgctctggag agaactgtta aagctctaga atttgttcaa 120
actgaatctc aaaaagattt ggaaataacc aaagaaaatc tggctcaagc agttgaacac 180
cgcaaaaagg cacaagcaga attagctagc ttcaaagtcc tgctagatga cactcaaagt 240
gaagcagcaa gggtcctagc agacaatctc aagttgaaaa aggaacttca gtcaaataaa 300

gaatcagtta aaagccagat gaaacaaaag gatgaagatc ttgagcgaag actggaacag 360
gcagaagaga agcacctgaa agagaagaag aatatgcaag agaaactgga tgctttgcgc 420
agagaaaaag tccacttgga agagacaatt ggagagattc aggttacttt gaacaagaaa 480
gacaaggaag ttcagcaact tcaggaaaac ttggacagta ctgtgaccca gcttgcagcc 540
tttactaaga gcatgtcttc ccttcaggat gatcgtgaca gggtgataga tgaagctaag 600
aaatgggaga ggaagtttag tgatgcgatt caaagcaaag aagaagaaat tagactcaaa 660
gaagataatt gcagtgttct aaaggatcaa cttagacaga tgtccatcca tatggaagaa 720
ttaaagatta acatttccag gcttgaacat gacaagcaga tttgggagtc caaggcccag 780
acagaggtcc agcttcagca gaaggtctgt gatactctac agggggaaaa caaagaactt 840
ttgtcccagc tagaagagac acgccaccta taccacagtt ctcagaatga attagctaag 900
ttggaatcag aacttaagag tctcaaagac cagttgactg atttaagtaa ctctttagaa 960
aaatgtaagg aacaaaaagg aaacttggaa gggatcataa ggcagcaaga ggctgatatt 1020
caaaattcta agttcagtta tgaacaactg gagactgatc ttcaggcctc cagagaactg 1080
accagtaggc tgcatgaaga aataaatatg aaagagcaaa agattataag cctgctttct 1140
ggcaaggaag aggcaatcca agtagctatt gctgaactgc gtcagcaaca tgataaagaa 1200
attaaagagc tggaaaacct gctgtnccag gaggaagagg agaatattgg tttagaagag 1260
gagaacaana angcttgtgg ttaaaaccca atcagcttat gggaacactt gaaaaccatc 1320
aaaanggaaa catttagnca aaaggcncag ttggattcct tggtnaaatc ctgncttctn 1380
ttccaaatgg atccgagaac cgcntagtgg ggggactatt caccagctgg gaanagccga 1440
ctt 1443

<210> 404
<211> 819
<212> DNA
<213> Homo Sapiens

<400> 404
gcgattcaaa gcaaagaaga agaaattaga ctcaaagaag ataattgcag tgttctaaag 60
gatcaactta gacagatgtc catccatatg gaagaattaa agattaacat ttccaggctt 120
gaacatgaca agcagatttg ggagtccaag gcccagacag aggtccagct tcagcagaag 180
gtctgtgata ctctacaggg ggaaaacaaa gaacttttgt cccagctaga agagacacgc 240
cacctatacc acagttctca gaatgaatta gctaagttgg aatcagaact taagagtctc 300
aaagaccagt tgactgattt aagtaactct ttagaaaaat gtaaggaaca aaaaggaaac 360
ttggaaggga tcataaggca gcaagaggct gatattcaaa attctaagtt cagttatgaa 420
caactggaga ctgatcttca ggcctccaga gaactgacca gtaggctgca tgaagaaata 480
aatatgaaag agcaaaagat tataagcctg ctttctggca aggaagaggc aatccaagta 540
gctattgctg aactgcgtca gcaacatgat aaagaaatta aagagctgga aaacctgctg 600
tnccaggagg aagaggagaa tattggttta gaagaggaga acaanaangc ttgtggttaa 660
aacccaatca gcttatggga acacttgaaa accatcaaaa nggaaacatt tagncaaaag 720
gcncagttgg attccttggt naaatcctgn cttctnttcc aaatggatcc gagaaccgcn 780
tagtgggggg actattcacc agctgggaan agccgactt 819

<210> 405
<211> 761
<212> DNA
<213> Homo Sapiens

<400> 405
ctgaaaataa ttttattatt ttacagttgt tcaggaaact tcccaggatg ttgtaaccaa 60
natttaatca ccacagtana tttanagcan atcagtcagc ccacttgtct tccctcttct 120
ttaggganag gctaggcagt gaacacatca tgtatgcaat ganaaaataa ccaactggta 180
ggatgggggga ggggagggga ggcagggaat aggcncaaat ggaattctat cctggctgtc 240
cttctcaggt ctatctatat ttaattttgt cttctctata ttctccttcc attgccacag 300
agggcanaga caatggggct gaaaaactgt aataactgnc actaacagca aagtanctta 360
gtncttcaag aggtcaggag ttgcagtgtg gtgttanacc agtcanactc ctggctgaaa 420

gtcaatgcct aatattggct cccagnggcc cctgagcact gtctcagggt ccacattcca 480
ggaatnttca natnttcctg gaatgacaag aattggaacc ctgctgncca tagacacttc 540
tccctgccct ttggtgaaag gaaagacttt gggccccttt aataccttan tatcccatgt 600
gatcaagggc caaaagccaa aggggattct tatccttata gcctaagacc ctgaaattct 660
tcccttccca attatatctg gaaattggcc aggggaanaa aaatgctgnc cttcccatgn 720
ggaatctacc aggnttaaaa ccccnttaag ggagttccct t 761

<210> 406
<211> 758
<212> DNA
<213> Homo Sapiens

<400> 406
gatactgaac ttcagattat taggtttatt gaaaccatcc tcttggcttg gctgaaagac 60
attcctcagt atcttttaca ggaccacaaa agatcagggt cctgcaaaat ctcaacaaat 120
attaggctca acaaaccaaa tgtgattctc agattaagca gaagcgttca ggctcagggc 180
agtagaagaa agcagactcg ccagtccctg cagctccaac ctgtcctcgt atcacctctg 240
tttttgcagg cactttccgt gaagagttgg agagaagacc tgtaaatggg aagactgttc 300
cactggaatt gatgttctga tgttagaggt gagagaattc caagttttga ggggagtggt 360
ccaaagagta acaactaagt ctatagatgg cccgtaaaac acagaatgag caggacatga 420
atcattagaa agtagatggc tgctagaagt ggcactcggg tccgtgaatg acagagtgaa 480
cgcaggactc gcttccatcc aacgccactc cgggtccttc gacaactgtt gcttgtaaga 540
tctattaaca gtgcctgctc ctgagtgcca caggagccaa tgataggagt ccgggaaaga 600
gtcccattca ctgngctcta accggctgga tctgctcctc ggccacagga gagagcattt 660
ttcagcagcc actctttggc cncggtcttt cttccagcag cttcctttaa atcattcctt 720
tcttggctgg nggttgccat aactgctggt tggacctt 758

<210> 407
<211> 778
<212> DNA
<213> Homo Sapiens

<400> 407
cttcaggaac tgttaaaaga aaaacaacaa gaagtaaagc agctacagaa ggactgcatc 60
aggtatcaag agaaaattag tgctctggag agaactgtta aagctctaga atttgttcaa 120
actgaatctc aaaaagattt ggaaataacc aaagaaaatc tggctcaagc agttgaacac 180
cgcaaaaagg cacaagcaga attagctagc ttcaaagtcc tgctagatga cactcaaagt 240
gaagcagcaa gggtcctagc agacaatctc aagttgaaaa aggaacttca gtcaaataaa 300
gaatcagtta aaagccagat gaaacaaaag gatgaagatc ttgagcgaag actggaacag 360
gcagaagaga agcacctgaa agagaagaag aatatgcaag agaaactgga tgctttgcgc 420
agagaaaaag tccacttgga agagacaatt ggagagattc aggttacttt gaacaagaaa 480
gacaaggaag ttcagcaact tcaggaaaac ttggacagta ctgtgaccca gcttgcagcc 540
tttactaaga gcatgtcttc ccttcaggat gatcgtgaca gggtgataga tgaagctaag 600
aaatgggaga ggaagtttag tgatgcgatt caaagcaaag aagaagaaat tagactcaaa 660
gaagataatt gcagtgtcta aaggacactt agacagatgt ccttcntatg gaagaattaa 720
agantaccat ttcaggcttt gaccatgaca gcagatttgg agtccaggnc caaccaga 778

<210> 408
<211> 752
<212> DNA
<213> Homo Sapiens

<400> 408
canattatta ggttnatnga anccatcctn tnggntnggn tgaaanacnt tcctnagtnt 60
nttttacngg accncaaaan atcagggncc tgcaaaatct cancaaatnt taggctcanc 120

aaaccaaang ngattntnaa attaancaaa ancgttcagg ctcagggcag taaaaaaaag 180
caaactcgcc agnccntgca gctccaacct gncctcgtat cnncctntgtt tttgcaggcn 240
ntttccgnga anagttggan anaaaacctg taaanggnaa aactgttcca ntggaatnga 300
ngttctgatg ttanaggnga nanaattcca agttttgagg ggagnggncc aaagagtacc 360
aactaagtnt ntananggcc cgtaaaacnc anantganca ggacntgaat cnttaaaaag 420
taaatggctg ntaaaagngg cnctcgggtc cgtgaatgac agagtgancn caggactcgn 480
ttccatccaa cgccantccg ggtccttcga caactgtngc ttgtaanatc tattaacagg 540
gcctgntcct gantgccaca ggagccaatg ntaggagtcc gggaagagtc ccatttcact 600
ggggctttaa ccgtctgaat ctggtccttg gccncagaga gagcnttttt nagnaggccc 660
ncnttttggg ccccgttntt ttttccagca ngcttccctt taattcattc ncttcccggg 720
ctgggggttg caaaacntgc tggntgacct tt 752

<210> 409
<211> 736
<212> DNA
<213> Homo Sapiens

<400> 409
ggcgtgtcaa aactaacgta cctgtcaagc tctttgcccg ctccacagct gtcaccacca 60
gctcagccaa gatcaagtta aagagcagtg agctgcaggc catcaagacg gagctgacac 120
agatcaagtc caatatcgat gccctgctga gccgcttgga gcagatcgct gcggagcaaa 180
aggccaatcc agatggcaag aagaagggtg atggaggtgg cgccagcggc ggcggcggcg 240
gtggtggtgg cagcggtggc ggtggcagtg gtggtggcgg tggcggtggc aacagccggc 300
caccagcccc ccaagagaac acaacttctg aggcaggcct gccccagggg gaagcacgga 360
cccgagacga cggcgatgag gaagggctcc tgacacacag cgaggaagag ctggaacaca 420
gccaggacac agacgcggat gatggggcct tgcagtaagc agcctgacag gagcaatggc 480
caccagcagg tgaagggcat cgctgcccag gcctcaagcc gggcacccaa ccctggatgc 540
caccccccag cgggtaccag aggaaagctg cagcaggccg cctcctcccc caacgcatnc 600
cagccagtgc catgtcctct gcaggtggag ttactggcct actccttccc atgaaccctt 660
ccttgtctgc acttgccagg ccagagggta gagcacangg gtttccccat acttaccttc 720
ccttcccagg acactt 736

<210> 410
<211> 766
<212> DNA
<213> Homo Sapiens

<400> 410
gggatccaat ctctttattg tcagggtccc ctccctgngg ccccccgcca aacctataga 60
aaaaacccaa gcctgggagt gtcctgggga ggggaggtag tatggggaaa cccctgngct 120
ctaccctctg gcctgggcag tgcanacagg gagggctcat ggggaaggag taggccagta 180
actccacctg cagaggacat ggcactggct gggatgcgtt gggggaggag gcgcctgctg 240
ccagctttcc tctggtaccc gctggggggt ggcatccagg gttgggtgcc cggcttgagg 300
cctggggcag cgatgccctt cacctgctgg nggccattgc tcctgtcagg ctgcttactg 360
caaggcccca tcatccgcgt ctgtgtcctg gctgtgttcc agctcttcct cgctgtgtgt 420
caggagccct tcctcatcgc cgtcgtctcg ggtccgtgct tccccctggg gcaggcctgc 480
ctcanaagtt gngttctctt ggggggctgg tggcccggct gttgccaccg gcaccggcac 540
caccactgnc accgncaccg ctgcaccacc accgncggcg cccgncgntt ggcgccaact 600
tcatnaccct tcttcttgca tctggaatgg nctttttgctt ncgcancgaa ctgntccaaa 660
cgggttaanc agggcatcna tatttggact tgaactgggn caancttccg ncttgaangg 720
ccttgcaagc ttnaatggtc tttaacttga actttggctt gaacct 766

<210> 411
<211> 812
<212> DNA

<213> Homo Sapiens

<400> 411
ggcgtgtcaa aactaacgta cctgtcaagc tctttgcccg ctccacagct gtcaccacca 60
gctcagccaa gatcaagtta aagagcagtg agctgcaggc catcaagacg gagctgacac 120
agatcaagtc caatatcgat gccctgctga gccgcttgga gcagatcgct gcggagcaaa 180
aggccaatcc agatggcaag aagaagggtg atggaggtgg cgccagcggc ggcggcggcg 240
gtggtggtgg cagcggtggc ggtggcagtg gtggtggcgg tggcggtggc aacagccggc 300
caccagcccc ccaagagaac acaacttctg aggcaggcct gccccagggg gaagcacgga 360
cccgagacga cggcgatgag gaagggctcc tgacacacag cgaggaagag ctggaacaca 420
gccaggacac agacgcggat gatggggcct tgcagtaagc agcctgacag gagcaatggc 480
caccagcagg tgaagggcat cgctgcccca ggcctcaagc cgggcaccca accctggatg 540
ccacccccca gcgggtacca gaggaaagct ggcagcaggc gcctcctccc ccaacgcatc 600
ccagccagtg ccatgtcctc tgcaggtgga gttactggcc tactccttcc ccatgagccc 660
tccctgtctg cactgcccag gccagagggt agagcacagg ggtttcccca tactacctcc 720
cctccccagg acactcccag gcttgggttt tttctatagg tttggcgggg ggccncaggg 780
aggggaccct gacaataaag agattggatc cc 812

<210> 412
<211> 857
<212> DNA
<213> Homo Sapiens

<400> 412
aaccatctta gcccccaaaa tgatgatgct ctggagacac gagctaagaa gtctgcatgc 60
tctgacatgc ttctcgaagg tggtcctact acagcttctg taagagaggc caaagaggat 120
gaagaagatg aggagaagat tcagaatgaa gattatcatc acgagctttc agatggagat 180
ctggatctgg atcttgttta tgaggatgaa gtaaatcagc tcgatggcag cagttcctct 240
gctagttcca cagcaacaag taatacagaa gaaaatgata ttgatgaaga aactatgtct 300
ggagaaaatg atgtggaata taacaacatg gaattagaag agggagaact catggaagat 360
gcagctgctg caggacccgc aggtagtagc catggttatg tgggttccag tagtagaata 420
tcaagaagaa cacatttatg ctccgctgct accagtagtt tactagacat tgatccatta 480
attttaatac atttgttgga ccttaaggac cggagcagta tagaaaattt gtggggctta 540
cagcctcgcc cacctgcttc acttctgcag cccacagcat catattctcg aaaagataaa 600
gaccaaagga agcaacaggc aatgtggcga agtgccctct gatttaaaga tgctaaaaag 660
actcaaaact caaatggccc gaagttcgat gtatgaaaac tgatgtaaag gaatacactt 720
tcagaaataa aaagcacagt gctgcttctg gagacatgcn gacaagnctt tttttgctga 780
nccagcagnt ntggctgatg tggactgaaa ctttggcag aatgcaggat ttggatggac 840
tcctggcnaa agtctta 857

<210> 413
<211> 790
<212> DNA
<213> Homo Sapiens

<400> 413
ctcaagtnga ttttattanc aaaaagngca aactattttg ancaaaagta aactatgagt 60
cacagcnttc agcaagacat canacncgga anagnganca atattcacta agtaaaatnc 120
agcanatgan atgtctntca catgtatatt naattattca tgctttttca atagtctntt 180
agtcaacttt cagngtaatt tccacaaata tatagcagnt caaacncaaa tgcaggancn 240
caanggcaaa gttnggcaac tgtttngggc taattatgag tntgaaagaa anccttatat 300
cacagtttca cgttcatgta anccactgng caacatgaat gaatntttaa angngttgac 360
nctgaaatca angtncaact aangaaanta aagaanaaaa gggggcttta aaatattngt 420
ngcnctacag tcgtatagta agaggcagaa aaaaatgaan gaattttaaa taatcttaca 480
cgtgtntaca gggccaggaa cgtaatgaat ccatgttaac ttaatttcat ttaaaattnc 540

atttgtagaa gtcncncaac agaaagatcc atgcggttga acagtgtgcc tgtncttgac 600
aagtgagaga agatccttct ccaaaaggga gattcagtct agggntactt cagttnttcc 660
catagnggct acagggcana atctttttca aaagcaattt tctggtccct aaatctacag 720
gcnctantgg gacctgtaat taaaancccc caattttaag gangattttt aaaccccact 780
taagctttta 790

<210> 414
<211> 1063
<212> DNA
<213> Homo Sapiens

<400> 414
gnnnnntncn gccanncnan agnntgntca cctccnagat nngggatggn ntggtgaccc 60
nggcnttgac tctgnnnngc gacntnttgc tagtcttcag gnctcctact acaggctttg 120
taatganctn nacttgnctt gagacagcct angggagacc acggatgntc tattannngn 180
gcangctgnn ctatngcaan ntgggnctna nnctgnanaa tcannngcng ccatgnnaga 240
tnaatagaag ctcatnntgt cataaatggn ccatgactta taaatnaagt ggactggata 300
tcttatgaca gnagcnatnt angcttngtg ngnagttaan gcttccacct nnggangata 360
agaggncnac cttgtntnan ctnntgcngc tgnaagancc agaganannt gccntgggag 420
attcatggcc natgatagta tatnatctct tacaccanat atgccttgct gnatcncaaa 480
tctggacata cacgntttcc ccatctcaga cttcnttgca gcagctgctt nccnacnnta 540
cccatgaacg acanntgctt acgntanagc ntgaacnatn tgatgagctt cntcagccca 600
gacctcatca tttcgagaag cacatgtccc tgcgtttcaa cctatggatg aggaaaagnc 660
ctngngctta aagctcttga aaatccttta cacnngaanc nttctgcata gcttnaatca 720
ctctgagntg cccacatngn gtnctggaag gcttccggnt annatggttc cgggacctnc 780
aacccttccg tttgaatnct nacntgaccg ganagggtnt gcctgggttc cttgngccnc 840
gaacttaacc ntcacaattn ggntgngant tcntggtaac ggcntaatct nccccaggaa 900
ttggccgctg cttcnacggg aattaanggg aatctttccc atcccnctta nnaccagtta 960
ggngcccntt tttcaatttt cngactcccg gagcttttaa aaaccggggg ccttaggttn 1020
cttggatggc nttgggggtn gcccccttta gggaattaaa ggg 1063

<210> 415
<211> 824
<212> DNA
<213> Homo Sapiens

<400> 415
gtttgattnt aacaaaannt attatgcaca aatnacnnag gntanagact ctnncatctn 60
anatnaaaat ancagttata attacacaca taatataggt accttataca atgattccaa 120
taaatatcac aggaaataca ntgcattttc aagntgnana gacnaatact tnctcattca 180
cagngnttga catanganag cctatttaca tancnatctg tataaagtca tgctctnant 240
ancaggntat ncagngctgn gccancacaa tgntttnaga angtgaagaa ccggncaaac 300
cactnntggn gctggggatc tgganaagcc acctgnanaa gcttcactct gagcangact 360
cannaatgnc ttgngccctt taggtggcac tggctgtgga agtggttaag ctgctgctga 420
actcaattcg tggactgnag aattaggaat gggganccagg cggttnggat gaccattgcc 480
cactcnanca natnccaaag nnctnagaan gggaacnctc caancctgct tnatggngat 540
taancatnct tcttcttttg cttaacccat ggattananc acancagcna gtacngactt 600
ggntttaccc ncttcngttg gaaataagga ttcttgatng actaaannnc agctggtnaa 660
aacntaactn tccctcaatt tagcnttatt ntatgaancc ggggcctant ntcntgttca 720
aaaangngnt tttaagttcc ggtaatccta ccggnaatta nttgggggct ntgaattcan 780
cnccccttana anatttnggn ttaccatttn aatccaaagg ccac 824

<210> 416
<211> 838
<212> DNA

<213> Homo Sapiens

<400> 416

ctcaaaagtg gaaaatatgt acaatctgta atgagctttt tcctgaaaat gtctatagtg 60
tgcacttcga aaaagaacat aaagctgaga aagtcccagc agtagccaac tacattatga 120
aaatacacaa ttttactagc aaatgcctct actgtaatcg ctatttaccc acagatactc 180
tgctcaacca tatgttaatt catggtctgt cttgtccata ttgccgttca actttcaatg 240
atgtggaaaa gatggccgca cacatgcgga tggttcacat tgatgaagag atgggaccta 300
aaacagattc tactttgagt tttgatttga cattgcagca gggtagtcac actaacatcc 360
atctcctggt aactacatac aatctgaggg atgccccagc tgaatctgtt gcttaccatg 420
cccaaaataa tcctccagtt cctccaaagc cacagccaaa ggttcaggaa aaggcagata 480
tccctgtaaa aagttcacct caagctgcag tgccctataa aaaagatgtt gggaaaaccc 540
tttgtcctct ttgcttttca atcctaaaag gacccatatc tgatgcactt gcacatcact 600
tacgagagag gcaccaagtt attcagacgg tcatccagtt tgagaaaaag ctnacctaca 660
aatgnatcca ttggcttggt gngnatacca gcaacatgga ncggctnaac tatcacttct 720
gnatctagnt cactggangg gccgtttggn aaggancca aatgggccag gataagacaa 780
aaggcnccct ttngggttaa tcagncttcc aagtctngca cctgtgnaac gcacttac 838

<210> 417
<211> 880
<212> DNA
<213> Homo Sapiens

<400> 417

aagcacaata cagcaattta tttagatgct taaaatgaat acaaagggaa aataaagatc 60
acaaaattat acatactaca acagtgtgtc atatattaga tggtataaat gaatccacca 120
tgatggtgtt gaactaaaga taaaactaaa tatccaaaat gcagcactca ttggtttgct 180
gcttcaacac aacacacttt tatacagatc taaaaggtgt caaaattagt agctgcaaag 240
tcaattcttg catgtgattt tagcttaaaa gatttcagaa aacagatctg aaataccagt 300
ttttgttttt gacagctgta atgtcaagga tattcagaac aagaaaaatc ctataataca 360
agagagtcca gatatatatc ttacgtggct ggcctctgtt gcaagattgt acaaggttat 420
gtgcaaaaac taagtctgtc caaaaagtcc atactagcgc agttttgagc ttttgctagg 480
taaactagat agagcgttta ttacacagca agggcaacac taaaaaaaga aatctatgat 540
gggcacacag taacaggatc atgagcatca cttgaatagg tctaaaagac tgtcaaatat 600
acatttcaac tattcagaat gaatacatga aaaaaaatcg cttttcccaa aggtctacta 660
tacncattan actgggagct tgnatgttgg gccctacact accatgggga attangttta 720
acacttntta aaaacatttg gccaatcatt tcncagangg gaaagaaatg ttgaaaaggc 780
cgataaaata aacccttggg ttttcctcgg gggattcatg gagtcacccg ccttaatggg 840
ttttcacatt taagttaccc gggcttggca aaaaaaggtt 880

<210> 418
<211> 763
<212> DNA
<213> Homo Sapiens

<400> 418

agaagatggc ggaagcggaa tttaaggacc atagtacagc tatggatact gaaccaaacc 60
cgggaacatc ttctgtgtca acaacaacca gcagtaccac caccaccacc atcaccactt 120
cctcctctcg aatgcagcag ccacagatct ctgtctacag tggttcagac cgacatgctg 180
tacaggtaat tcaacaggca ttgcatcggc cccccagctc agctgctcag taccttcagc 240
aaatgtatgc agcccaacaa cagcacttga tgctgcatac tgcagctctt cagcagcagc 300
atttaagcag ctcccagctt cagagccttg ctgctgttca ggcaagtttg tccagtggaa 360
gaccatctac atctcccaca ggaagtgtca cacagcagtc aagtatgtcc caaacgtctg 420
tagaaattct tatggactgg aatcttcctc aaggcttact ttgttcctgg gatgcagtgg 480
tgcatagaag atagggcatt gactcactca gacctggctt gcccagcatg cattgcaaca 540

ataatgtgca agttattaaa gacatgagtg aattcgtgac agattgtcag aaaagaaaca 600
agagttttct acaacaaaaa actggcttat ggaacatata cttctgcttg agttgaatgt 660
gttggggctg agtgtaagaa aatgcaagct gcaaatctgg cttacatgtg gaaccaaagc 720
tggaaatgng tgctttaaan gcaacttgta aaattggatt tcc 763

<210> 419
<211> 753
<212> DNA
<213> Homo Sapiens

<400> 419
ggactattta cttttaatgt aattatcaat acagtcggtt taaatctacc attttgttgt 60
tggttttcta tttgtttcat ttgttctctc ttccttttt tcacctcttc aggattattt 120
tggattcact actttttta nagngtcgtt ttaccactac tattggccta ttacctgtat 180
ctctttttt taatggcatt tctctaggat ttacaatatg catctttagc ttatagtatc 240
ttgaaatagt agngtaacac ttcacaaata gagtaaaaac cttataatct tccatttttc 300
ccttccttct tttgtgctat tgatgacnca tatttactcc tacagatatt ataaacaaat 360
tgatatacnc acattatcat ttttgcttta catactcaat tatcttttaa ataaaataaa 420
aattgaggag aaaatccgtt atattatcta cacatttact gtttccagca cttttcattt 480
ctttgngtag attcaaattt ctgncatctt ccctttgccc aaagaacttc ttttcatctt 540
tcttatagtt caggtctgct ggcaaccaat tagctcagcc tttggtttgc taaaaaagtt 600
catatattat cttgattttc aaatggnatt taagctctat ataggaattc ttaggtgact 660
ttaattcctt catcattggg aagangtcat aaagggcttg caaaggacta gaaatctgct 720
tacatttttt natttggtaa tctttcttac cca 753

<210> 420
<211> 799
<212> DNA
<213> Homo Sapiens

<400> 420
gaaaaacgct ttgataccaa gaattaaaaa tgcttgtcta caaacatctt cccttgcggt 60
tcgtgtaaat tcattagtgt gcttaggaaa gattttggaa tacttggata agtggtttgt 120
acttgatgat atcctaccct tcttacaaca aattccatcc aaggaacctg cggtcctcat 180
gggaatttta ggtatttaca aatgtacttt tactcataag aagttgggaa tcaccaaaga 240
gcagctggcc ggaaaagtgt tgcctcatct tattcccctg agtattgaaa acaatcttaa 300
tcttaatcag ttcaatttct tcatttccgt cataaaagaa atgcttaata gattggagtc 360
tgaacataag actaaactgg agcaacttca tataatgcaa gaacagcaga aatctttgga 420
tataggaaat caaatgaatg tttctgagga gatgaaagtt acaaatattg ggaatcagca 480
aattgacaaa gtttttaaca acattggagc agaccttctg actggcagtg agtccgaaaa 540
taaagaggac gggttacaga ataaacataa aagagcatca cttacacttg aagaaaaaca 600
aaaattagca aaagaacaag agcaggcaca gaagctgaaa agccagcagc ctcttaaacc 660
ccaagtgcac acacctgttg ctactgttaa acagactaag gacttgacag acacactgat 720
ggataatatg tcatccttga ccagccnttc tggtagtacc cctaaatctt ctgcttcaag 780
tctttcactt ctggtcctt 799

<210> 421
<211> 770
<212> DNA
<213> Homo Sapiens

<400> 421
gttcaatatg ggggacattc tggctcatga atctgaatta cttggactag tgaaagagta 60
tttagatttt gctgaatttg aagacacctt gaaaacattt tcaaaagaat gcaaaataaa 120
aggaaaacca ttgtgtaaaa cagtaggcgg atctttcaga gactccaaat cattgacaat 180

tcagaaggat cttgtcgctg catttgacaa cggagaccag aaggtgttct tcgatctgtg 240
ggaggagcac atttcaagtt ccatccgaga tggggactcc tttgcccaga agctggaatt 300
ctatctccac atccattttg ccatctatct tttgaagtac tctgtgggga gaccggacaa 360
agaggagctg gatgaaaaga tttcctactt caaaacctac ctggagacca aaggggcagc 420
cttgagccag accacagagt ttcttccttt ctatgccctt ccttttgttc ccaaccctat 480
ggtgcacccc tcatttaaag aactcttcca ggattcctgg actccagagt taaagttgaa 540
gttggaaaag tttctagctt taatatctaa agccagcaac acgccaaagc ttttaacaat 600
atataaggag aatgggacan agtaacaaag aaatcttgca gcagcttcac cagcagctgg 660
ntgaagcttg aaccgtaggt caatgacata cctcaaacgg naccataaga tccaggcccg 720
actaccacaa tctcantgga gtcacagcan aactggtggg attctcttga 770

<210> 422
<211> 733
<212> DNA
<213> Homo Sapiens

<400> 422
caaaangaan gctttatttt gaattttaaa aatacataca tcttacactg taatcaaaac 60
aaagcttaag aaagtcaatt cccgcttcct ttagccctga cttacactgg gtacccgttt 120
ctgtggccgc cgggggtgac ggnccctttgc aggggctcat ccccgctcca ctgcacatta 180
gccagcccct tccgccttgt cttccccgng ttggtcatga tccccaggta ctccgnggtc 240
anaagcttct ctcctgagag ttctccgagc tggggctgga tcagttcgtc tttgtccana 300
tcggcttcca tgatgtcatg gncctcttca tcatcttcat cttcatcatc atcagattca 360
agaacaccat ctggtagctc ttcggaattt agctgcttga tgatgaattc tatctggcgg 420
atcatttcag cattgccttc tttgatgaag cagcgtagga tgtcttccat tcccattgct 480
cttgcttcct cacgaatgga tggancagaa aggatgctgt acagagctcc attcacatac 540
ggctgtatct catggttttc atggccaaga agatccgaaa ggactttgag caccgaggcc 600
tgccaccttg gcacacatgg tcttccctgn gctgcggagg gcagaggttc atggagcaaa 660
agccaccgag tactccaacg gggnagccag acagggcagn cagggtcctt tcanaacatc 720
aacccagccc gaa 733

<210> 423
<211> 862
<212> DNA
<213> Homo Sapiens

<400> 423
catctgtcca gggtgcatcg agccgggagg gctcaccagc caggagcagc acgccactcc 60
actccccctc gcccatccgt gtgcacaccg tggtcgacag gcctcagcag cccatgaccc 120
atcgagaaac tgcacctgtt tcccagcctg aaaacaaacc agaaagtaag ccaggcccag 180
ttggaccaga actccctcct ggacacatcc caattcaagt gatccgcaaa gaggtggatt 240
ctaaacctgt ttcccagaag cccccacctc cctctgagaa ggtagaggtg aaagttcccc 300
ctgctccagt tccttgtcct cctcccagcc ctggcccttc tgctgtcccc tcttccccca 360
agagtgtggc tacagaagag agggcagccc ccagcactgc ccctgcagaa gctacacctc 420
caaaaccagg agaagccgag gctcccccaa aacatccagg agtgctgaaa gtggaagcca 480
tcctggagaa ggtgcagggg ctggagcagg ctgtagacaa ctttgaaggc aagaagactg 540
acaaaaagta cctgatgatc gaagagtatt tgaccaaaga gctgctggcc ctggattcag 600
tggaccccga gggacgaagc cgatgtgcgt caggccagga gagacggtgt caggaaggtt 660
cagaccatct tggaaaaact tgaacagaaa gccattgatg tccangtcaa gtccaggtct 720
atgaacttca agccaagcaa ccnttgaagc agatcaagcc cctggaggca atcatggaaa 780
agggtgccgt ggcagcaaga caagggcaag aaaaatgctt ggaaatggcn gaagatcccc 840
acacnggaaa ccagcaggcc cg 862

<210> 424
<211> 859

<212> DNA
<213> Homo Sapiens

<400> 424
gagttatatt attactttat tttctttttt taaaatgtag cattaaagtc atccaacata 60
cagatattcc tatggctcct ggcacatttt actctctcta aagtcaggta ttttaattat 120
gagatgaaga aaatcatctc attaaaatgg caacatttct gataaatgtt tcatatttat 180
gtgatgggta attgactccc catctacccc tccagtccag agctacaaaa gacagtgcac 240
aaccacagct aacaggtggt gggggtgccc aagtagacag ggctgcagaa caagcaacgg 300
ggttaaactt ctcaaacaac aagcaacttc tttatttgta cagagtaaga atatagaaga 360
aaagcatcat tttccttttt agcccttta ttagtgtttt gcctccaccc aagttactgc 420
ataccaagca gctaataaaa accaactgac ttaaagtctc tgaaatgcat gcaacttaaa 480
attccctaaa gcacacatcg gttccgagtc tgatttttac agggcagagg ctacggtgct 540
gctgggttac caggggtgtc tggcatgctg ctggggtttg aagtcgctgc tgctgnggct 600
tctggctgct gggtttctgt gtggggatct ttctgcattt ccagcatttt tcttggcctt 660
ggctgctgcc acggnaccca tcttcatgaa tgcctgcaaa tggctggacc tgnttcaaag 720
gttgctgggg ctggagttca ttagacctgg accttggccc tgggacatca aagggctttc 780
tggtcaaggt ttttccaaga agggcctgga accttcctgg acancggntt tttctgggcc 840
tggacgcnca attgggggtt 859

<210> 425
<211> 837
<212> DNA
<213> Homo Sapiens

<400> 425
cagaatggag gtggagtccc taaacaaaat gcttgaggag ctaagacttg aacggaagaa 60
actaattgag gattatgaag gcaagttgaa taaagctcag tccttttatg aacgtgagct 120
tgatactttg aaaaggtcac agctttttac agcagaaagc ctacaggcca gcaaagaaaa 180
ggaagctgat cttagaaaag aatttcaggg acaagaagca attttacgaa aaactatagg 240
aaaattaaag acagagttac agatggtaca ggatgaagct ggaagtcttc ttgacaaatg 300
ccaaaagctt cagacggcac ttgccatagc agagaacaat gttcaggttc ttcaaaaaca 360
gcttgatgat gccaaggagg gagaaatggc cctattaagc aagcacaaag aagtggaaag 420
tgagctagca gctgccagag aacgtttaca acagcaagct tcagatcttg tcctcaaagc 480
tagtcatatt ggaatgcttc aagcaactca aatgacccag gaagttacaa ttaaagattt 540
agaatcagaa aaatcgagag tcaatgagag attatctcaa cttgaagagg aaagagcttt 600
tttgcgaagc caaaacccaa agtctggatg aagagcagaa gcnacagatt ctaagaactg 660
ggagaagaaa gtaaatgaac caagagactc agcaggaata ttatgaaagg gaacttaaaa 720
anctgcaagt agaatggaag aagaggggct taattaacga nggccattct aagacttttg 780
gaagaattag cttggaacnc cttttggcaa ttgaacttgt cncaggtaat gccattt 837

<210> 426
<211> 724
<212> DNA
<213> Homo Sapiens

<400> 426
gattctaaca aaatttatta tgcagtaatt acaaaggtta aagactcttc catctcaaat 60
aaaaataaca gttataatta cacacataat atagtacctt atagaatgat tccaataaat 120
atcacaggaa atacagtgca ttttcaagtt ggagagacaa atactttctc attcacagtg 180
tttgacatag gaaagcctat ttacataaca atctgtataa agtcatgctc ttagtaacag 240
tctatacaga gctgtgccaa cacaattctt tcagaatgtg aagtaccggg caaaccactc 300
ctggcgctgg ggatctggag aagccactgg agaagcttca ctctgagcag gactcaaaaa 360
tgtcttgggc cctttaggtg gcactggctg tggaagtggt ttgctgctgt tgaactcaat 420
atcgtggact ggagaattag gaatgggatc caggcggtta ggatgtccat tgcccactcc 480

accagattcc agagcactta nattgggaac actcacaaac ctgtttgttg gtgatttatc 540
attcttcttc ttttgcttag ccaatggatt aataacacca acagtaggac ttgagttaaa 600
cactttggtg aaagttagtt tctcgaattg actaattcca gctgataaaa cttattatcc 660
tcaattagtt tctttatgan ctgggcctct ttctgtaagc atggctttta attctggaat 720
catc 724

<210> 427
<211> 981
<212> DNA
<213> Homo Sapiens

<400> 427
aaaaacaaaa taaaacaaaa aanaaaaant atatatatnt atatatatat atatatatac 60
acacacacac acacaactca aagagttana atcattacnt ncaaatgaaa gtcgtaatga 120
tagatgatga tagntncaat gaanctgnga ncatanatta angaaacana naacantncn 180
aaaggtccac aaatctggtc ctatgaaaag agtaaaatta ccaagactng gtgaaaganc 240
ccannaaaan ncanagagag anagagagag agagaganac anagagagag aganaaaggg 300
aaggcacacn taancnatat cagcaataaa angggnnact ttantacana ttctgcaanc 360
attannnnna taatganagg atattatgaa cagttgtatg gcnatatgtt tgaaaactta 420
gatgccgata tgtttgaaaa cttaaatgaa acggaaaaat tccttgaaga accacaantt 480
aaatttgaca caggtagaaa atntgaatgc agttngncct tcagtatctg tggggaaatc 540
ggttncagaa ccactccccc antaccnaaa tttataattg ctcaagttcc tgatataaaa 600
tggcaaagta tttgcatata ncctatccct acccttttac atactttaaa taacctntga 660
gttncttnat tatacctaac ataatgtaca tttctgtggc aaatcgntnn taatattgga 720
ttttnaaaat tatnttantt ttggaatagg nngtantatt tcctggggct tttttttcc 780
ccaaatattt tntaattccc caattnggtt ggaatcttgg gaaccccatg gnggggancc 840
catangattt tgggaanggn ccaacttggg gccttngtaa ctttttaaag aaatngggaa 900
ttctttgntn aanaattctt ncncccaaag aaaaccccct tggccccana agttntttna 960
aatggggaaa tttncccaaa c 981

<210> 428
<211> 655
<212> DNA
<213> Homo Sapiens

<400> 428
ataggacaac atgaacattg ttgagtcact gaagctaaac caaacttgct tttctgtaat 60
aaacccaatt tggtcatgat ttaatatttt ttggatcgct ctggatttgg tttgctaata 120
ttttattcat ccaagaaata ttcattagag aaattggcat gggatttttt tttcattgta 180
atgtccttgt caggtatcaa ggctttttca gcctgataaa gcatattaag aaatgcttcc 240
tcttttccta ttctctggaa aagattgtgt aatattgctg ttactacttc ctgtaatgtt 300
tggtgaaatt cacaattgaa gacatctggg cctagcgtgt tctttgtagg aagaatatta 360
agaaagaatt ccatttcttt aaaagttacg agcacagttg gccttccaga tctatggatc 420
ccacatgagt tccagattca accaattgtg tattaaaaat atttgggaaa aaaagccaca 480
agaaataata caactataca aaataatata atttttaaaa tacaatataa caacgattta 540
cacagaatgt nccattatgt taggnattat aagtaactca gaggntattt aaagnatgtg 600
agaggnnatg gataggctat atgccaaata ctttgccant cttatantca gggaa 655

<210> 429
<211> 788
<212> DNA
<213> Homo Sapiens

<400> 429
gagcagcaga gatttttgct gtgagaatta attaccagta acagttcaat atgggggaca 60

ttctggctca tgaatctgaa ttacttggac tagtgaaaga gtatttagat tttgctgaat 120
ttgaagacac cttgaaaaca ttttcaaaag aatgcaaaat aaaaggaaaa ccactgtgta 180
aaacagtagg cggatctttc agagactcca aatcattgac aattcagaag gatcttgtcg 240
ctgcatttga caacggagac cagaaggtgt tcttcgatct gtgggaggag cacatttcaa 300
gttccatccg agatggggac tcctttgccc agaagctgga attctatctc cacatccatt 360
ttgccatcta tcttttgaag tactctgtgg ggagaccgga caaagaggag ctggatgaaa 420
agatttccta cttcaaaacc tacctggaga ccaaaggggc agccttgagc cagaccacag 480
agtttcttcc tttctatgcc cttccttttg ttcccaaccc tatggtgcac ccctcattta 540
aagaactctt ccaggattcc tggactccag agttaaagtt gaagttggaa aagtttctag 600
ctttaatatc taaagccagc aacacgccna agcttttaac aatatataag gagaatggac 660
aaagtaccaa gaaatcttgc agcagcttca ccacagctgg ttgaagctga acgtaggtca 720
gngccttcct taaacgggcc aattaagaat ccaggccgac taccacaatc ttantggggg 780
tcccagca 788

<210> 430
<211> 655
<212> DNA
<213> Homo Sapiens

<400> 430
caaaatgaat gctttatttt gaattttaaa aatncatacn tnttacnctg naatcaaaac 60
aaagcttaan aaagtcaatt cccgnttcct ttanccctga cttacnctgg gtncccgttt 120
ntggggccnc cgggggngac gggcctttgc aggggctcat ccccgntcca ctggacatta 180
nccagcccct tccgccttgg cttccccgng ttggtcatga nccccaggtn ctccgnggtc 240
aaaagcttnt ntcctgaaag ttctccganc tggggctgga tcanttcgtc tttgnccaaa 300
ncggnttcca tgatgncatg ggcctnttca tcatcttcat tttcatcatc atcanattca 360
anaacnccat ntggnanctt ttcggaattt aactgcttga tgangaattc tatntggngg 420
ancatttcag cattgccttn tttgaagaac cancgtagga nggtttccat tcccattggt 480
nttgnttcct cacgaatgga tggaacanaa aggatgctnt acananctcc attcacatac 540
ggntgnatnt catggntttc atggccaana anaatcccaa aggctttgag cccaggnctg 600
gcccttggca caaatgttnt tcctggcttc cgaaggccaa ggttcattga ccaaa 655

<210> 431
<211> 844
<212> DNA
<213> Homo Sapiens

<400> 431
ggaagaagga agaggtaact ataactaccc aatattgcag ccatggagtc catgcttaat 60
aaattgaaga gtactgttac aaaagtaaca gctgatgtca ctagtgctgt aatgggaaat 120
cctgtcacta gagaatttga tgttggtcga cacattgcca gtggtggcaa tgggctagct 180
tggaagattt ttaatggcac aaaaaagtca acaaagcagg aagtggcagt ttttgtcttt 240
gataaaaaac tgattgacaa gtatcaaaaa tttgaaaagg atcaaatcat tgattctcta 300
aaacgaggag tccaacagtt aactcggctt cgacaccctc gacttcttac tgtccagcat 360
cctttagaag aatccaggga ttgcttggca ttttgtacag aaccagtttt tgccagttta 420
gccaatgttc ttggtaactg ggaaaatcta ccttccccta tatctccaga cattaaggat 480
tataaacttt atgatgtaga aaccaaatat ggtttgcttc aggtttctga aggattgtca 540
ttcttgcata gcagtgtgaa aatgggtgca tggaaatatc actcctgaaa atataatttt 600
gaataaaagt ggagcctgga aaataatggg ttttgatttt tgngtatcat caaccaatcc 660
ttctgaacaa gagcctaaat ttccttgtaa agaatgggac ccaaatttac cttcattgng 720
tcttncaaat cctgaatatt tggcttctga atcctacttt ctgngaactt gtgaaaccag 780
ccagtggata tgggattcnt ttaggaactg gtatggaatg ccgggatttt aataaaaggg 840
gaaa 844

<210> 432

<211> 807
<212> DNA
<213> Homo Sapiens

<400> 432
atcaaagcta aaatttattt ggtgcatact cctcttgata tcaggtatgt tcgcatatac 60
ctttttcttt catgtgtaaa aacaaccatg tgaggtattt tacaggtcaa aagaaaacaa 120
aaactacttc cttattcagt gtaaaggagg cttataagca ttccaaaata aaaacaaaca 180
aaaaccagac aagtacatag tctatttcca tttcctttta tacatcctct ctatatatca 240
cacatttagc aataggagaa tagagaacta attcaaatgc aagggaatct tttttgtaga 300
ttctgttgac agatgctctt taacctaaac attttctact ctaaacataa cggacttaat 360
tgtcttcagt acgtgaaata attttaaggt gatctagtac tttgaaaatt tcattcactt 420
aagaacactt aagctgaaaa atagcactat ttttcagagg caatttctca acagaaaaag 480
gcaatggtaa cagttcaatt gatggaaatg gttgaaataa aatacctgaa gtagaaaaaa 540
ggtgtaggaa caatttttgta aaaacatagc accattacct caacgaatga acaaatttta 600
catactggat ttttttcaaa tgacttattt tcatatttag tagttcaagg tctataagct 660
ggtatattaa gctttctttc tggttaagag ntcaacactt acatcatggt attttacnaa 720
attaaaaacc aatttcttaa ataaaccgng gctcctaaaa tggtaccaag gaaaaattct 780
tcaataccta atttaattcc ataagga 807

<210> 433
<211> 866
<212> DNA
<213> Homo Sapiens

<400> 433
cttcagccca gatgcagaat gggggcccct ccacaccccc tgcatcaccc cctgcagatg 60
gctcacctcc attgcttccc cctggggaac ctcccctgtt agggaccttt ccccgggacc 120
acacctcttt ggcactagtt cagaatggtg atgtgtcggc cccctctgcc atactcagaa 180
caccagaaag cacaaaaccg ggtcctgttt gtcagccacc agtgagtcag agccgctccc 240
tgttttcttc tgtcccgtcc aagccaccaa tgtctctgga gcctcaaaat gggacgtatg 300
caggaccagc gccagcattc cagccatttt tcttcactgg agcatttcca tttaatatgc 360
aagagctggt actcaaggtg agaattcaga acccatctct tcgagaaaat gatttcattg 420
aaattgaact ggaccgacag gagctcacct accaagagtt gctcagagtg tgttgctgtg 480
agctgggtgt taatccagat cangtggaga ngatcagaaa gttacccaat actctgttaa 540
ggaaggacaa ggatgttgct cgactccaag atttccagga gctggaactg gttctgatga 600
taagtgaaaa taatttttctg ttcanaaatg ctgcatccac actgactgaa aggccttgct 660
ataacaggag agcttcaaaa actgacttac taatgcacag ggacttttat cactggagta 720
ttatgacagt gngcatcacc ttntgggccc aaggaccaag ccattggtct aaaaggcctc 780
aaaatgcccc gggganggcct ctggtggcca tggcattagt atatactaac catcattctg 840
gccaggtaag gaagcccctg gacccc 866

<210> 434
<211> 764
<212> DNA
<213> Homo Sapiens

<400> 434
caaaataacc tttatttttg atacaaaaat aaagatgcta actcctttag ctcagtttcc 60
cacaataacc tttaaaatag caacagattc agtctcaaaa attgcttttc atttgtagtg 120
gaaaatgaaa gtggagaaca tggaacagca atatttgngc tcttctcata ggatgcagtt 180
acacacacat atgactggaa tcacttcaga gtaaaaaaaa agtgggctgg gtgcagtggc 240
tcacacctgt aatcccagca ctttgggagg ccaaggacag gagcatcact taaggccaga 300
agtttgagac cagcctgggc cacatagtga gaccctgtct ctatgggcgg ggtgggggtg 360
gggggcattg taaaaaagca gttgttcttt tanaaggcat cagagagccc tntagtgacc 420

acgaagggga gttaatgcag agatgactcg agacagagaa gcagtcatga gtgtttacaa 480
aggaaaaagt gagggaggga aagctctttt ggttaacagc atatttacaa ttagttaact 540
gnattcttaa atacttttaa cctgagtaac atttataaat atgttatagg aaacctcaca 600
gtcacaagtc acactagaat ccatctgtcc agtatctggg ctttccccac accagaatcc 660
atctgtccag tatctgggct ttcccgagtc ttcctcttct cataagttcc caanggcagc 720
anaagtgtga agcatgcaca ccaaggaaaa acgcattcca gccc 764

<210> 435
<211> 834
<212> DNA
<213> Homo Sapiens

<400> 435
agattttgtt aattttccta caaaaaatgg atttgctact aaccaaaacc cctcctgatg 60
agataaagaa cagtgttcta cccatggttt acagagcact agaagctcct tccattcaga 120
tccaggagct ctgtctaaac atcattccaa cctttgcaaa tcttatagac tacccatcca 180
tgaaaaacgc tttgatacca agaattaaaa atgcttgtct acaaacatct tcccttgcgg 240
ttcgtgtaaa ttcattagtg tgcttaggaa agattttgga atacttggat aagtggtttg 300
tacttgatga tatcctaccc ttcttacaac aaattccatc caaggaacct gcggtcctca 360
tgggaatttt aggtatttac aaatgtactt ttactcataa gaagttggga atcaccaaag 420
agcagctggc cggaaaagtg ttgcctcatc ttattcccct gagtattgaa aacaatctta 480
atcttaatca gttcaattct ttcatttccg tcataaaaga aatgcttaat agattggagt 540
ctgaacataa gactaaactg gagcaacttc atataatgca agaacagcag aaatctttgg 600
atataggaaa tcaaatgaat gtttctgagg agatgaaagt tcaaatattg ggaatcagca 660
aattggcaaa gtttttaaca acattggagc agaccttntg actggcagtg agtccgaaaa 720
taaagangac gggttacaga ataaccttaa aagagcatcc ttaccacttg gaggaaaaac 780
caaaatttgc caaaagaacc aggaccggcn ccgaagctgg aaaagccgca ggct 834

<210> 436
<211> 812
<212> DNA
<213> Homo Sapiens

<400> 436
acagaagtaa agtttattac atttgaaaca atacagcaga aacctcaaaa gtttactcat 60
aaatatagtt taattcttac aaatcttctt ttgaaaatgc aattcatata tgctgcaacc 120
tcagaagttt gaatttgaaa tgaaatatga aggtagtagt cagggaagtc acatcagagt 180
gccttgtcaa atatccaaac aaatcagcac atacctcttc cttgatacag gaggaaaaaa 240
gtgattctaa atatatccaa gtgaatgcag aaaaatacat tactatttga ggcagaccat 300
gctaaaatat aatttacaat gattagtttg cacttaagat ggttaataac gcatttaaac 360
caatgaaatg aaggttaagt tgaattttgt agtatttgct cagtctctgt actaaacaat 420
agttcatctg aaaagtttgg aaaaagcaaa taacctgata cttctcttta tgcttatcat 480
tttctcactg tcatcttaaa tgcaaacaaa tcaatacagc atcaagattt tttacatatt 540
aaaatgaaga ctaatgactc atagactgng taccatatag tacttaatag atgagcttgc 600
aatgaccatc acctcaattt tttaaataac accaagatcc acaagccaaa ataaacattt 660
gattaaaaag ttatggtatt caagataact cagtttcctt tttctctttg agattgggna 720
anggctgggt ctttaaaaaa ccctggaaaa gggagttggg taaagaggga aaaaaatcct 780
tcaangcttt taaaaaaact tcnactgggt ta 812

<210> 437
<211> 842
<212> DNA
<213> Homo Sapiens

<400> 437

gtggaagagg cgtacctatt tgcaaagtgc agagcaggca tggattgcca attctggaac 60
agagcaaagc cccaacttgc cctccactgg tgatgtcaca cccacccatg aagagcctgc 120
ctctagggtt gttgaatgtt gggtcacgaa gatctcaacc tggccaaaga agagaaccca 180
gaaagatcat cacagtttct gtaaaagaag atgtacacct gaaaaaggca gaaaatgcct 240
ggaagccaag ccaaaaacga gacagccaag ccgatgatcc cgaaaacatt aaaacccagg 300
agctttttag aaaagttcga agtatcttaa ataaattgac accacagatg ttcaatcaac 360
tgatgaagca agtgtcagga cttactgttg acacagagga gcggctgaaa ggagttattg 420
acctggtctt tgagaaggct attgatgaac ccagtttctc tgtggcttac gcaaacatgt 480
gtcgatgtct agtaacgctg aaagtaccca tggcagacaa gcctggtaac acagtgaatt 540
tccggaagct gctactgaac cgttgccaga aggagtttga aaaagataaa gcagatgatg 600
atgtctttga gaagaagcag aaagaacttg aggctgccag tgctccagag gagaggacaa 660
ggcttcatga tgaactggaa gaagccaagg acaaaagccc ggcggagatc cattggcaac 720
atcaagttta ttggagaact cttttaaact caaaatgctt gacttgaagc catcattgca 780
tgactgtgtg gtgaagctgc ttaagaaccn ttgatgaaga atccctggaa tggcctgtgt 840
cg 842

<210> 438
<211> 678
<212> DNA
<213> Homo Sapiens

<400> 438
aaactngcan tgtntgtntt tattttgtnc tttatatttt caaagngaaa agaaatanna 60
ctgagncaat ntctttttgt ntttttaaan atttgtncta tgtatttaca ngccttaaag 120
nngctctaaa gatntcaaga gnattaanag nacttttntc agggnagcac tntttttttt 180
ttaaacantt nttggngttc tgtggnccac annatttcct tntgtntcaa ngtnatgtat 240
gtnttgatna cnatngngat nttttaaann ttntgaanca agctgagagg cnngcanaaa 300
gatntgangc cnnaaaaaaa aaaatctttn ttaccttgtn caccccaaac tttttcaaat 360
ctggnctaaa tgctntacct taaaacanac atgaggggca tcttgaaggg gagggaaant 420
tatttctctg cntttctatn atacangtng tttacanaaa ctgngaatta naaaattaca 480
ctggnatttg cngaccttaa aataaattaa aagtnctcaa ctnttttttt ttttgntaaa 540
cnttttttta agnatgannc cntggttaaa aagaaaagnt ttaaaccgaa aatattttct 600
ataaataata cctggatttt ggntttaggg cccccgccct aaggnttgna ggttactttt 660
ntccnangac ctttttcc 678

<210> 439
<211> 826
<212> DNA
<213> Homo Sapiens

<400> 439
gacccttac caacaaatga aaatgatgat gatatatgca agaaaccctg tagtgtagca 60
cctaatgata ttccactggt ttctagtact aacctaatta atgaaataaa tggagttagc 120
gaaaaattat cagccacgga gagcattgtg gaaatagtaa aacaggaagt attgccattg 180
actcttgaat tggagattct cgaaaatccc ccagaagaaa tgaaactgga gtgtatccca 240
gctcccatca ccccttccac agttccttcc tttcctccaa ctcctccaac tcctccagct 300
tctcctcctc acactccagt cattgttcct gctgctgcca ctactgttag ttctccgagt 360
gctgccatca cagtccagag agtcctagag gaggacgaga gcataagaac ttgccttagt 420
gaagatgcaa aagagattca gaacaaaata gaggtagaag cagatgggca aacagaagag 480
attttggatt ctcaaaactt aaattcaaga aggagccctg tcccagctca aatagctata 540
actgtaccaa agacatggaa gaaaccaaaa gatcggaccc gaaccactga agagatgtta 600
gaggcagaat tggagcttaa agctgaagag gagctttcca ttggcaaagt acttgaatct 660
gaccaggata aaatgagcca ggggtttcat cctgaaagag acccctntgg cctaaaaaaa 720
gtgaaaagct gtggaagaaa atggagaaga actgagccag accgtaatgg ggcctgaaag 780
ggttctgang gtgaaggaat agatgcttaa ttcangcttc cccaga 826

<210> 440
<211> 689
<212> DNA
<213> Homo Sapiens

<400> 440
aaatatttgt tctatgtatt tacaagcctt aaagttgctc taaagatttc aagagtatta 60
agagtacttt tctcagggta gcacttttt ttttttaaac aattcttgga gttctgtggt 120
ccacagcatt tccttctgtt tcaatgttat gtatgttttg attactattg tgatttttta 180
aattttctga agcaagctga gaggcaggca gaaagatttg atgccaaaaa aaaaaaaatc 240
tttcttacct tgttcacccc aaactttctc aaatctggac taaatgctat accttaaaac 300
aaacatgagg tgcatcttga aggggaggga aatttatttc tctgcttttc tattatacaa 360
gttgtttaca gaaactgcaa attaaaaaat tacactggca tttgcagtcc ttaaaataaa 420
ttaaaagttc tcaacttttt ttttttgcta aacatttttt taagtatgag tccttgttta 480
aaaagaaaag attaaaacag aaaatatttt ctataaataa tacatgtatt ttggttttag 540
tgctcccgcc ctaaggtttg aagtttactt ttatccagta ccttttttcct ccatgatcac 600
ctttttttct ctttcccctn ttccactcgg gcacacgtgg ggggtttctg cnanaattgg 660
ccttgctgca ctgngaatgg gcnaaaacc 689

<210> 441
<211> 883
<212> DNA
<213> Homo Sapiens

<400> 441
ctttttatcc tggaccagga cctggggact tccccaatgc ttatggaacg cctttttacc 60
caagtcagcc ggtgtatcag tcagcaccta tcatagtgcc tacgcagcaa cagccgcctc 120
cagccaagag agagaaaaaa actataagaa ttcgggatcc aaaccaggga ggtaaagaca 180
taacagagga gattatgtct ggaggtggca gcagaaatcc tactccaccc ataggaagac 240
ccacgtccac acctactcct cctcagcagc tgcccagcca ggtccccgag cacagccctg 300
tggtttatgg gactgtggag agcgctcatc ttgctgccag caccctgtc actgcagcta 360
gcgaccagaa gcaagctcaa atagctataa ctgtaccaaa gacatggaag aaaccaaaag 420
atcggacccg aaccactgaa gagatgttag aggcagaatt ggagcttaaa gctgaagagg 480
agctttccat tgacaaagta cttgaatctg aacaagataa aatgagccag gggtttcatc 540
ctgaaagaga cccctctgac ctaaaaaaag tgaaagctgt ggaagaaaat ggagaagaag 600
ctgagccagt acgtaatggt gcttgagagt gtttcttgag ggtgaaggaa tagatgctaa 660
ttcaggcttc acagatagtt ctggtgatgg gggtacattt ccatttaaac cagaatnctg 720
gaagcctact ggtacttgaa ggtaagaaca gtatgaccag ggagtttctg gtggactttc 780
cagttcatgc ctggctgnat tccaaaancc naagggcctg gcttctatta anggatgngg 840
ttnttgacag gatcaaccaa ncccaaatgg ccaatgggga act 883

<210> 442
<211> 777
<212> DNA
<213> Homo Sapiens

<400> 442
gctaaacatt tttttaagta tgagtccttg tttaaaaaga aaagattaaa acagaaaata 60
ttttctataa ataatacatg tattttggtt ttagtgctcc cgccctaagg tttgaagttt 120
acttttatcc agtacctttt tcctccatga tcacctttttt ttctctttcc cctctcccac 180
tcgtgcacac gtgggggttt ctgcgagaat tggccttgct gcactgtgat tggcgaagac 240
gtgaaacttt ttaaaaaaat acttaaattg tttcttttgt ttcattttgt gtatttgaag 300
ttttagttat cctcagactc ctctttctgct tcccgcagcc acgtgaagaa tgccgtgaca 360
gatttcagag ccacgccctt cccattctgc tctgcagggt ccttgctgct ctcccatttg 420
tagaaggcat cctcggagat cacctcctcg tcatatagac aatcaaaaaa catccgcagc 480

aaattggcag gttgatcaag ttttactatc gatgcttgta gtgcataaag tgcttgcagt 540
tccttctctg natctgagtc taggtacttg agtaagatcg gcactctctg cttgaaacag 600
cagtgtccac ttcttgaang tagaagaagt cggctattaa tagctggttt acaaacagca 660
gtcatttaaa gctctaagga atggtaggtg aactcntctg ggatttcggc taagaataag 720
ccctttancc aggccaaaga acctggtcan tcaattcgct tttggccctc caataaa 777

<210> 443
<211> 875
<212> DNA
<213> Homo Sapiens

<400> 443
taacacagtg aatttccgga agctgctact gaaccgttgc cagaaggagt ttgaaaaaga 60
taaagcagat gatgatgtct ttgagaagaa gcagaaagaa cttgaggctg ccagtgctcc 120
agaggagagg acaaggcttc atgatgaact ggaagaagcc aaggacaaag cccggcggag 180
atccattggc aacatcaagt ttattggaga actctttaaa ctcaaaatgc tgactgaagc 240
catcatgcat gactgtgtgg tgaagctgct aaagaaccat gatgaagaat ccctggagtg 300
cctgtgtcgc ctgctcacca ccattggcaa agacttggac tttgaaaaag caaagccacg 360
tatggaccag tactttaatc agatggagaa aattgtgaaa gaaagaaaaa cctcatctag 420
gattcggttc atgcttcaag atgttataga cctaaggctg tgcaattggg tatctcgaag 480
agcagatcaa gggcctaaaa ctatcgaaca gattcacaaa gaggctaaaa tagaagaaca 540
agaagagcaa aggaaggtcc agcaactcat gaccaaagag aagagaagac caggtgtcca 600
gagagtggac gaaggtgggt ggaacactgt acaaggggcc caagaacagt cgggtactgg 660
acccctcaaa antcctaaaa atcactaagc ctacaattga tgaaaaaant cactggacct 720
aaagccagct aggcagctgg ggaaaaggca gcagtggtgg accaangcaa gtgaaactga 780
gccntacggc aagtgcttnc agttaaacag atctntgncc tgaaccttca gaaccttang 840
gtcccgccat cacgcctgta aagttggatt cccga 875

<210> 444
<211> 756
<212> DNA
<213> Homo Sapiens

<400> 444
cttttaaact tgcaatgntt gnctttattt tggtctttat attttcaaag ngaaaagaaa 60
tagtactgag tcaatttctt tttggttttt taaatatttg gtctatgnat ttacnagcct 120
taaagttgct ctaaagattt caagagtatt aagagtactt ttctcagggt agcacttttt 180
ttttttaaa caattcttgg agttctgngg nccacagcat ttccttctgn ttcaatgnta 240
tgtatgtttt gattactatt gggatttttt aaattttctg aagcaagctg anaggcaggc 300
ngaaagattt gatgccnaaa aaaaaaaaaa aatctttntt accttggtca ccccaaactt 360
tntcaaatct ggactaaatg ctatacctta aaacaaacnt gaggggcatn ttgaagggga 420
gggaaattta tttctctgnt tttctattat acnagttgnt taccgaaact gnaaattaaa 480
aaattaccct ggcntttgca ggccttaaaa taaattaaaa gntctcaact ttttttttt 540
gccaaacatt tttttaagta tgagnccttg nttaaaaaga aaagattnaa nccgaaaata 600
ttttctataa ataatacntg nattttggtt ttaaggctcc cgccctaang nttgaaggtt 660
acttttatcc nagnnccctt tttccctcca tgaanacccc tttttttcnc ctttcccctt 720
ttcccacttn gggccccccc tnggggggtt tttgcg 756

<210> 445
<211> 783
<212> DNA
<213> Homo Sapiens

<400> 445
cagaaaatgg tgcttaccaa ctacatgttc cctcaacagc caaggactga ggatgttatg 60

tttatatcag ataatgaaag ttttaaccct tcattgtggg aggaacagag gaaacagcgg 120
gctcaagttg catttgaatg tgatgaagac aaagatgaaa gggaggcacc tcccagggag 180
ggaaatttaa aaagatatcc aacaccatac ccagatgagc ttaagaatat ggtcaaaact 240
gttcaaacca ttgtacatag attaaaagat gaagagacca atgaagactc aggaagagat 300
ttgaaaccac atgaagatca acaagatata aataaagatg tgggtgtgaa gacctcagaa 360
agtactacta cagtaaaaag caaagttgat gaaagagaaa aatatatgat aggaaactct 420
gtacagaaga tcagtgaacc tgaagctgag attagtcctg ggagtttacc agtgactgca 480
aatatgaaag cctctgagaa cttgaagcat attgttaacc atgatgatgt ttttgaggaa 540
tctgaagaac tttcttctga tgaagagatg aaaatggcgg agatgcgacc accattaatt 600
gaaacctcta ttaaccagcc aaaagtcgta gcacttagta ataacaaaaa agatgataca 660
aaggaaacag attctttatc agatgaagtt acacacaata gcaatcagaa taccagcaat 720
tggtcttctc catctcggat gtctgattca gttctcttaa tactgatagt agtcaagaca 780
cct 783

<210> 446
<211> 866
<212> DNA
<213> Homo Sapiens

<400> 446
agattacaac acacatacaa taagtgaatt ttatcaaaat acagcacatt tcttctacta 60
tatccataaa aatcaattcc tatgtaaata gtactgaaaa tcaactaaaa tgagttaaaa 120
tttacaaaga gttgttaaag ggtttcaatc aaaattatta aaactataca gtacaataac 180
caattgataa catcttgaaa gaagtgcaat atttgagttc acatattttt aaaagtgctg 240
cctacttact ctgactagca agaatggaaa gtgagtccaa ctcacttttg caaaaataat 300
gttggttggt gttttaagct agtcttataa aagtcttaat taaaatcaag gttgataaac 360
aaagcataac agattaaaaa ttcccaaatt gcatttctta gtaaataaaa atgaagtgca 420
ataaccaaat attgctctaa tgaaaggttc cagactagcc tcaactaaac agttattggt 480
cttctatggc actttttttct ggtccaaata accatgcatt aatccttacc attacatgtt 540
actcaaattt tatttgatta catagaacaa aaacaaataa aattaatggt ctggataaac 600
aaaattaata aacctctatc atcaaatatt tgttacagta actaggaaca aagaaaggca 660
gtttggtggg taaaacacta ttacactgat ccccatagga aaccccttta aagactctgg 720
aagtgttgag ttcacattta atggtacctg tagaaacagn cctttatttg gacaccttta 780
cccactggca ngccctaang gacccatccc tttgctctat aacttttcac aagcaattct 840
ctaatcctgg gccagtttnc aaaagc 866

<210> 447
<211> 789
<212> DNA
<213> Homo Sapiens

<400> 447
gtcacgttgg aatgcaaatt gagcacatca ttgaaaacat tgttgctgtc accaaaggac 60
tttcagaaaa attgccagag aagtgggaga gcgtgaaact cctgtttgtg aaaactgaga 120
aatcggctgc acttcccatc ttttcctcgt ttgtcagcaa ttgggatgaa gccaccaaaa 180
gatctttgct taataagaag aaaaaagagg caaggagaaa acgaagagaa agaaattttg 240
aaaaacaaaa ggagaggaag aagaagaggc agcaggctag gaagactgca tcagttctta 300
gtaaagatga tgtggcacct gaaagtggtg atactacagt gaagaaacct gaatcaaaga 360
aggaacagac cccagagcat gggaagaaaa aacgtggcag aggaaaagcc caagttaaag 420
caacaaatga atccgaagac gaaatcccac agctggtacc aataggaaag aagactccag 480
ctaatgaaaa agtagagatt caaaaacatg ccacaggaaa gaagtctcca gcaaagagtc 540
ctaatcccag cacacctcgt gggaagaaaa gaaaggcttt gccagcatct gagaccccaa 600
aagctgcaga gtctgagacc ccagggaaaa gcccagagaa gaagccaaaa atcaaagaag 660
agcagtgaag gaaaaaagtc cttcgctggg gaaaaaagat gccgaagaca gacttcaaaa 720
aagccagang ccaggttttc ccactcctag taaatctgtg agaaagcttt ccacaccccc 780

aaaaaatgg 789

<210> 448
<211> 820
<212> DNA
<213> Homo Sapiens

<400> 448
caggattact tatggaggtt ttattatttn tatttatttt tgagactgag tcttgctctg 60
tcatcaggct ggagtgcagt ggctcactgc aacctccgcc tcccaggttc aagcaattct 120
cctgcctcag cctccctagt agctgggatt acaggtgtcc accaccatgc ccaattaatt 180
tttgtatttt tggtacagac agggtttcac catgttggcc aggatggtct cgatctcgtt 240
gaccttgtga tccgcctgcc tcggcctccc aaagtgctgg gattacaggc gtgagccacc 300
gcccctggac tacttatgga ggttttaaaa aatcttttaa gtccaggcct gacgtttaga 360
gaaggttaca aaggcggcca ggatctgagt atttccaaaa agctctggag gcagcattga 420
ggtttccttc cagttgaatc actgacttta ggtcgactgg ggtactttgg gtttttgggg 480
ccatttttg ggggtgtggg aagcttttct cacagattta ctaggagtgg tgaaaaactt 540
ggcctctggc ttttttggag tctgtctcgc atctttttc cccagcgaag gacttttttc 600
cttcactgcc tcttctttga tttttggctt cttctcttgg gcttttccct ggggtctcag 660
actctgcagc tttttggggg tcttcaanat gctggcaaaa gccttttctt ttcttcccac 720
gaggggngc ctggggatta ggactctttt gcctgggana cttcttttct tgngggnang 780
tttttgaaac nntacttttt ccaatttagc ctggaggcct 820

<210> 449
<211> 936
<212> DNA
<213> Homo Sapiens

<400> 449
aaaagaagga aacagttact caactccaaa atatcattga ggctaattct cagcattacc 60
aaaaaaatat taatagtttg caggaagagc ttttacagtt gaaagctata caccaagaag 120
aggtgaaaga gttgatgtgc cagattgaag catcagctaa ggaacatgaa gcagagataa 180
ataagttgaa cgagctaaaa gagaacttag taaaacaatg tgaggcaagt gaaaagaaca 240
tccagaagaa atatgaatgt gagttagaaa atttaaggaa agccacctca aatgcaaacc 300
aagacaatca gatatgttct attctcttgc aagaaaatac atttgtagaa caagtagtaa 360
atgaaaaagt caaacactta gaagatacct taaaagaact tgaatctcaa cacagtatct 420
taaaagatga ggtaacttat atgaataatc ttaagttaaa acttgaaatg gatgctcaac 480
atataaagga tgagtttttt catgaacggg aagacttaga gtttaaaatt aatgaattat 540
tactagctaa agaagaacag ggctgtgtaa ttgaaaaatt aaaatctgag ctagcaggtt 600
taaataaaca gttttgctat actgtagaac agcataacag agaagtacag agtcttaagg 660
aacaccatca aaaagaaata tcagaactaa atgagacatt tttgtcagat tcagaaaaag 720
gaaaaattaa cattaatggt tgaaattcaa ggtcttaang gacagtgtga aaacctaccg 780
ccaggaaaag caagaagcca ttttaaantt ntgagagntt acccagagga ttttggaaat 840
ttcccaancn gaactggggg gaatctgctg ggaaaaatag gtcaggagtt cgaatcatgg 900
aaccaccagc aggcctttga ngtcatgacc tgagca 936

<210> 450
<211> 806
<212> DNA
<213> Homo Sapiens

<400> 450
aactcaaaac agtgttaagt tcctatgctg ttagtactgt atcttgtcca cacctcaaac 60
aacagtgaga tctctgagca catggtctgt acctcaacca cttttctatc accagggtct 120
agaatagttg ggcatttaaa taaaatttgc taaatgaatg aaaaatccaa aataaatcat 180

gaagccattt ataaatcaca ccaatcttgc ttgggttaaa caatagaaag taacactttt 240
gaaagagaag gcaaacaggt gttagagggg caagaatgtg agctcgagga aaagacagct 300
acgaactgtg tttttaacaa ctcattattt ggctactata tttcccaatc tattctaaca 360
ctaacaagaa tctgtctaat taattgtgac aacatctgca aaaccatagt tacctatttt 420
ttcttccaac tcttttactg aagacagagg atcatttttt acagaaggtg attttgctaa 480
ggaatccttt aatagtatca actctgctct cctatctcgt aatttttttt gntctagtag 540
tggctttagg ttttcatgtt cctttataaa acatttttct ttttcattat ggatttcact 600
tttgctacat gtttgagata cttctttcaa cttgaattaa aagaatctga ttttcaagcc 660
ttggtttttc attagcattc ttcatttcta gaagatccag actgcanggn ctcttttttct 720
ggactggaat tcttctaact cttttccttt aagaagaacc tttttcttgg ntcataggcc 780
tcttcaatta aggacttaag gtcttt 806

<210> 451
<211> 909
<212> DNA
<213> Homo Sapiens

<400> 451
ctgagctctt ccagggcaag aaatatgacg ggccagaagt ggatgtgtgg agtctggggg 60
tcattttata cacactagtc agtggctcac ttccctttga tgggcaaaac ctaaaggaac 120
tgagagagag agtattaaga gggaaataca gaattccctt ctacatgtct acagactgtg 180
aaaaccttct caaacgtttc ctggtgctaa atccaattaa acgcggcact ctagagcaaa 240
tcatgaagga caggtggatc aatgcagggc atgaagaaga tgaactcaaa ccatttgttg 300
aaccagagct agacatctca gaccaaaaaa gaatagatat tatggtggga atgggatatt 360
cacaagaaga aattcaagaa tctcttagta agatgaaata cgatgaaatc acagctacat 420
atttgttatt ggggagaaaa tcttcagagc tggatgctag tgattccagt tctagcagca 480
atctttcact tgctaaggtt aggcccgagc agtgatctca acaacagtac tggccagtct 540
cctcaccaca aagtgcagag aagtgtttct tcaagccaaa agcaaagacg ctacagtgac 600
catgctggac cagctattcc ttctgttgtg gcgtatcccg aaaaggagtc agaccagcac 660
tgcagatagg tgaccctcaa agaagatggg aaatttcctt ccnggaaatc aaagtggcag 720
tgctggttgg aaggaaangg gaattgcttc cagccaggtc ccatgctttg ggnaatgcca 780
ggtaatncct aataaggcgg atattcctgg aacgccagga aaagctccac tggnccctag 840
tagtancnca gcatctggtg ggaatgacnc gaccgaaatt ncttaaggtt tgcagtggag 900
agaacttcc 909

<210> 452
<211> 672
<212> DNA
<213> Homo Sapiens

<400> 452
actgaaaaaa agtgaanttt naattatntt gtnaatnnac tnaaaaaacc ncacncaagc 60
aatgttcaca antntaaatt naaacctttt gcactaaaaa ancacaaaan ancaaacaca 120
aaaccacagg cntgaactgn aaacctgtct taactatgaa ctggncttaa ggttaattct 180
tannngccat tcantatttc nntccttggn aactgtaatg ttntagcacc ggatgatctc 240
ccgnanaggt nctagaannng acngnctgcc agngnangga gatncttccn tatacaccac 300
ttnanacnca taccgtcnan tttcanaccn acccagacgg nangcacatg gngatggggc 360
cncacnccna ctntnanggn aacggaagta gggcaggngg cgcatnggtt gcacatcttt 420
aatgtattgc attcgnaaaa aaaaggccag ntttcnatcc caggcgtgct ctngacctna 480
gactttaatn ncatgattta naanatncag nacgntattg cctaaatntt attctataca 540
tttccatcag tggttnagga aaacacttta aatgcaactn anttccacat canannncact 600
gnggttacag ntttagctca ttgggcaatt tttngaagca atttttttnng aaangctntt 660
ggaatgnccc cc 672

<210> 453

<211> 834
<212> DNA
<213> Homo Sapiens

<400> 453
aagaagccaa gaagtctgaa gaaccaagaa ttcggaagaa gccgggaccc aagcccggat 60
ggaagaagaa gcttcgttgt gagagggagg agcttcccac catctacaag tgtccttacc 120
agggctgcac ggccgtgtac cgaggcgctg acggcatgaa gaagcacatc aaggagcacc 180
acgaggaggt ccgggagcgg ccctgccccc accctggctg caacaaggtt ttcatgatcg 240
accgctacct gcagcgccac gtgaagctca tccacacaga ggtgcggaac tatatctgtg 300
acgaatgtgg acaaaccttc aagcagcgga agcaccttct cgtccaccaa atgcgacatt 360
cgggagccaa gcctttgcag tgtgaggtct gtgggttcca gtgcaggcag cgggcatccc 420
tcaagtacca catgaccaaa cacaaggctg agactgagct ggactttgcc tgtgaccagt 480
gtggccggcg gtttgagaag gcccacaacc tcaatgtaca catgtccatg gtgcacccgc 540
tgacacagac ccaggacaag gccctgccct ggaggcggaa ccaccacctg ggccaccgag 600
cccctctgtg accacagacg gccaggcggt gaagcccgaa cccacctgag gacggcagtg 660
aggatgagca cctctagcag cctggacttc gcagtggctg tgtcaagcct cacccttcgt 720
gtgcacccgc atgggagggt cggagggttg cttgccgncc ttggtgctgg angcgggctt 780
ggtgtccggc tcaagtagcc ttctttgntc ttgggaccag tgggttattt tccc 834

<210> 454
<211> 703
<212> DNA
<213> Homo Sapiens

<400> 454
cccgtgtaaa taatttatta caagcataac atggagctct tgttgcacta aaaagtggat 60
tacaaatctc ctcgactgct ttagtgggga aaggaatcaa ttatttatga actgtccggc 120
cccaagtcac tcagcgtttg cgggaaaata aaccactggt cccagagcag aggaaggcta 180
cttgagccgg acaccaagcc cgcctccagc accaagggcg ggcagcaccc tccgaccctc 240
ccatgcgggt gcacacgaag ggtgaggctg acacagccac tgcggagtcc aggctgctan 300
aggtgctcat cctcactgcc gtcctcaggt gggttcgggc ttcaccgcct ggccgtctgt 360
ggtcacagag gggctcggtg gcccaggtgg tggttccgcc tccaggggca gggccttgtc 420
ctgggtctgt gtcagcgggt gcaccatgga catgtgtaca ttgaggttgt gggccttctc 480
aaaccgccgg ccacactggt cacaggcaaa gtccagctca gtctcagcct tgngtttggt 540
catgtggtac ttgagggatg cccgctgcct gcactggaac ccacagacct cacactgcaa 600
aggcttggct nccgaatgtc gcatttgggg gacgaaaaag gtgcttccgc tgcttgaaag 660
gnttggccca attnggtaca agatatagtt ccccaccttt ggg 703

<210> 455
<211> 825
<212> DNA
<213> Homo Sapiens

<400> 455
atggcaatca ggaaaaggtg ccagaacccg aggctttgga ccttccagat gacttgaacc 60
ttgacagtga agacaagaat ggtggtgagg acaccgacaa tgaagaagga gaagaagaga 120
atcctttgga gataaaagaa aaaccagaag aagcaggtca tgaagctgag gaaagaggag 180
agaccgagac cgaccagaac gaaagtcaga gtccacagga gcctgaggaa ggccccagtg 240
aagatgacaa ggcagaaggg gaagaggaaa tggacacagg agctgatgac caagatggag 300
atgctgctca gcatcctgaa gaacactctg aggagcagca gcagtctgtg gaggaaaaag 360
acaaggaagc cgatgaagaa ggtggagaga atggccctgc tgaccaaggt ttccagcccc 420
aggaggaaga agaacgggag gactctgata cagaggagca ggtgccagag gctttggaga 480
ggaaggagca tgcctcctgt gggcagactg gtgtggagaa catgcagaac acacaggcca 540
tggagctggc tggggccgca cctgagaagg agcaggggaa agaggaacac ggaagtggag 600

ctgcagatgc aaaccaggca gaaggccatg aatcgaattt cattgcccag ttggccttcc 660
agaacacacc aggaaaaaca cacagagttt taagaggaaa cctgggcagg cttgacaatt 720
gaacgttnca tgggtgatca caattgaacg tgtgcacaag aagctganga cttgtggaat 780
ccggacaggc attgccaacc aggggccagc ttaacaagcc ccagg 825

<210> 456
<211> 740
<212> DNA
<213> Homo Sapiens

<400> 456
acatcaacaa cagtggtata tgttttaata gttttcagaa tataagctgc atagcttttt 60
agaataaaaa atgatataac ttcaggtaca tgctttggga cacttggtta aacaaggaat 120
ctgtgtcttt gatgaccacc tcaaaagggt cgcagacttc acagtgtaac ttggaaacag 180
acaaggagat agatgattac atcatgacat actgcctaca aaagaacatt ctgacagaac 240
attaagtaga acagagcaca cagtttcaag tattcagcac tgctttctgg ccaagtaaaa 300
actgcctaaa gatcagtttc tttcgactgg aaaaaatага tggagctgct gagttctgga 360
cacagcgttt ctttcccaga atgagactgg ctcagtccag cttgaaagca gtgtgaggaa 420
tcactcttcc ccttgactgt taagaaaaaa aaaaatgaac taaacaaata aattactaca 480
acaacaggga ccatggcact gaatgaaata aaggggcaat caccttccca tcattgcata 540
gtctcccgaa gcagcaagtg tgaaagagga tactgaaaag ccacttcatt tttacacagc 600
ccaagggatc gtttttatng atgacctggg cacctataat gnccagttgc tttatgagaa 660
ccacacacac accacattct tcctaccctn taagagaagg taggttcctt tcacaataag 720
gaaaaccccc ccttatactt 740

<210> 457
<211> 726
<212> DNA
<213> Homo Sapiens

<400> 457
aaaatgtagt caactttatt ctccttaaac cacaaaatag agtctttggt tgtacaaaca 60
tcactagtta cagtctcgcc gaggtctcgg ctggggtggg gcagttagtt agtcacaggc 120
cagaactcct gtggggtctc tttaaaatgc taacacccag gttaaaagac ttggggcaag 180
ggtggtgctg gagctggcag ggcccccacc ccaagtctgg gggaggtgcc tgctcctcta 240
ggagggcaca gggcccaggc cacggcgccc aggccttacg gggcggcggc tgctgcacag 300
tgccacatct tcagggccca cagcgccggg tgagggcctg cccagaagca ccagagccac 360
ttctccatcc tcctcctgcg ggccagggct gggagatggt tccagggacc tcaactcctc 420
agcaaagtcc ggtgacaggc gtcccgggga ggtgctggtc tgggggccga ggtcttccac 480
aggggtgggc gacggggtgg gcccagggga aggggcctcg gccagtcgct ccaggggccc 540
ccgcgtgccc cggcctttct gggacctgct gaggaccatc tgtgctcgga gagcgtcctg 600
ttccaatgac ttcatcctgg ctggccttca caagcgcacg cttctcggnc ttcagggccc 660
cggacttcgg caaggggaca nggcacgctt cgggtgccgg tggcttccgg actttggacg 720
ccgcaa 726

<210> 458
<211> 870
<212> DNA
<213> Homo Sapiens

<400> 458
cgcggcctct ccgccgggtg taccacctgt cgcggcgcga gacctctggt gaaagaaaag 60
atgttgtccc ggttaagagt agtttccacc acttgtactt tggcatgtcg acatttgcac 120
ataaaagaaa aaggcaagcc acttatgctg aacccaagaa caaacaaggg aatggcattt 180
actttacaag aacgacaaat gcttggtctt caaggacttc tacctcccaa aatagagaca 240

caagatattc aagccttacg atttcataga aacttgaaga aaatgactag ccctttggaa 300
aaatatatct acataatggg aatacaagaa agaaatgaga aattgtttta tagaatactg 360
caagatgaca ttgagagttt aatgccaatt gtatatacac cgacggttgg tcttgcctgc 420
tcccagtatg gacacatctt tagaagacct aagggattat ttatttcgat ctcagacaga 480
ggtcatgtta gatcaattgt ggataactgg ccagaaaatc atgttaaggc tgttgtagtg 540
actgatggag agagaattct gggtcttgga gatctgggtg tctatggaat gggaattcca 600
gtaggaaaac tttgttgnat cagcttgtgc aggaatacgg cctgatagat gcctgccagt 660
gtgtattgat gtgggaactg ataatatcgc actcttaaaa ganccatttt acatgggctt 720
gaccagaaac gagatcgcac ccacagttga tganctgatg gatgagttta tgaaagcttt 780
actgacagat atggccggaa caccttttatt cagttcgaag acnttggaaa tcataangcc 840
ttcaggtctt tgagaaagtc cggggaaaaa 870

<210> 459
<211> 761
<212> DNA
<213> Homo Sapiens

<400> 459
aaatgtaaga tatttattaa ataaaaaggt tacactatga tttttataca ctgttgaaaa 60
caatgacttt tatttactta aagccagcag tagttcccat tactctcata atgttatagt 120
taaggcttga tttagttcca gaaaataaat agggtaaatt tttaatattt ccctagctct 180
gtctgctata gggaatttca gagtatgaag gtaagatgaa gcagatatat aagaacattt 240
ttagataatg acaatttttc cttaaaattt ggtgaaaatt tagtttcttc tcaaaattct 300
gtacttctat ccataaaagt aaatttctat tttagtagct ctgtaagaac taggccagag 360
aagagtatta cccataatag taaatagcaa atactttggc aagtctgaat tagagtacaa 420
gtgaagacat tcacaaacac acttttttaca tctcctggat gtggtacggg ctgtatgtta 480
gaattaaagc atcacaacta tctgattgta gggtgctggt gggcaatgca atcaatcaac 540
acgtctaccc caacagatgt ggagacccat ggaaaaaata catcaaccaa agtggtcagg 600
gagaacaaaa ccccagaaaa caccccttaaa actgaagaca ttatctcttc ttggctgaaa 660
aaaggggttc cctggagcac angaaaggtt ttatcaaggg aggcttctat tcngtaatca 720
caggaaggct tgatgcanat tcctggccat tcatacccca t 761

<210> 460
<211> 876
<212> DNA
<213> Homo Sapiens

<400> 460
ctgagctcct gaagcgccct aaggagtaca ctgtgcgctt cacttttcca gacccccccac 60
cactcagccc tccagtgctg ggtctgcatg gtgtgacatt cggctaccag ggacagaaac 120
cactctttaa gaacttggat tttggcatcg acatggattc aaggatttgc attgtgggcc 180
ctaatggtgt ggggaagagt acgctactcc tgctgctgac tggcaagctg acaccgaccc 240
atggggaaat gagaaagaac caccggctga aaattggctt cttcaaccag cagtatgcag 300
agcagctgcg catggaggag acgcccactg agtacctgca gcggggcttc aacctgccct 360
accaggatgc ccgcaagtgc ctgggccgct tcggcctgga gagtcacgcc cacaccatcc 420
agatctgcaa actctctggt ggtcagaagg cgcgagttgt gtttgctgag ctggcctgtc 480
gggaacctga tgtcctcatc ttggacgagc caaccaataa cctggacata gagtctattg 540
atgctctagg ggaggccatc aatgaataca agggtgctgt gatcgttgtc agccatgatg 600
cccgactcat cacagaaacc aattgccagc ttgtgggtgg tggaggaaca gagtggtagc 660
ccaatcgatg gtgactttga agactacaag ccgggaggtg ttggaagccc tgggtgaagt 720
catgggcagc cnggccccga naagtgaagc tttnctttcc agaagtntcc gagagaacat 780
aattgggggg gcctaaaann cctctggggg cttcccttct tttgaanaat gctntggnct 840
gcaantgact tggcaaccat ttaggcccct taaagg 876

<210> 461

<211> 689
<212> DNA
<213> Homo Sapiens

<400> 461
gcaaacaaga tccatttagt ggggaagagg ggactattaa aagctgctag aaaactgaat 60
aaagcaaatc aagactgaga acagttccaa ctcccatcaa tctccaaaca gtgacaggtc 120
ggcagcaact cctttccttt atttcttccc cttgtaaagg gaaattcaag ttcagcagca 180
ttcctttcct gccccaagtc ctcaaccaga caagaggctg caggcaccaa atcttgggct 240
ggataatggc aaaggcctca gaagctcacc tccagctctg agcttcaaca gctgtttgta 300
ccagtgagtc agcattaaat ccaccagaaa agaacagcac cacccaaaga ctgggggca 360
gctgggcctg aagctgtagg gtaaatcaga ggcaggcttc tgagtgatga gagtcctgag 420
acaataggcc acataaactt ggctggatgg aacctcacaa taaggtggtc acctcttgtt 480
tgtttagggg gatgccaagg ataaggccag ctcagttata tgaagagaag cagaacaaac 540
aaagtctttc agagaaatgg atgcaatcag aagtgggatc cccggncaca tcaaggtcac 600
actccacctt catgtgcctg aaatggttgc caggtcagct gcaggcccan aggcagtctt 660
canaaggaag gggagaccac agaggactt 689

<210> 462
<211> 840
<212> DNA
<213> Homo Sapiens

<400> 462
aggagccttt ggagttccat gccaagcggc cttggcgccc cgaggaggca gtagaagatc 60
cggacgagga ggatgaggat aatactagtg aagccgagaa tgggttctcc ctggaggaag 120
tgttacggct cggaggcacc aagcaagatt accttatgct ggctactttg gatgagaatg 180
aggaagtgat agatggaggc aaaaaaggag caatcgatga ccttcagcaa ggtgaattgg 240
aagcatttat tcaaaatctt aatttggcga agtatacaaa agcttcctta attgaagaag 300
atgaaccagc tgaaaaagaa aattccagca aaaaagaagt aaaaatacct aaaataaata 360
ataaaaatac agcagaaagt caaaggacat cagttaataa ggtgaaaaat aagaataggc 420
cagaaccaca ttctgatgag aatggcagta ccacaccgaa agtaaagaaa gataaacaga 480
acatctttga atttttgag agacagactt tgttacttag gcctggaggc aaatggtatg 540
atctggagta cagcaatgaa tattctttga aaccccagcc tcaggatgtt gnatctaagt 600
acaaaaccct tgctcagaag ctgtatcagc atgaaatcaa cttattcaaa agtaagacga 660
atagtcaaaa gggagcctct tctacctgga tgaaaggcaa ttgtgtcatc ggggaccact 720
aggtgacagg atggcagcca ttgattcttc ttattcagga tgatgcccgt tcacaccact 780
ttcagnttgt agnaaactct tggggaaccc ttggtaaaaa ggaanggcna caaaacagca 840

<210> 463
<211> 784
<212> DNA
<213> Homo Sapiens

<400> 463
agatgtaagt agaattttaa tctataattt acattaataa ctcatttcct ttgtttttta 60
gtttttgag tggttttaat cctcttcttt ttaaaatgtt tctttttctt gatgatactt 120
tttgcatctc tgttgtgtag ccagtcatca cgttcagcct cccatctaag ctgtttgaga 180
cttgcattat ctttgttagc catggcattc atgccaatgt tatcaaactt ggatcccata 240
ttttcatcca atagatggcc aaactcttca gcagatacaa ataggctgga atcatttaag 300
tttcttttct tttttcttgg cccttgaaat gagccagcaa agtcaaaatc atctgtacct 360
tttctcttgc ttttcttagt actgactttg gagtggactt caagttctgg aacactctca 420
ctttcatcat ctaacacatc catgaatgtt cctccatctt catcaacttc agcaaattct 480
tcatcatcca tacttcctaa agaaacttca tcgtcatcca ggttaccaag ttcatcatca 540
ctaccttctg aatcttcatc taatgtgtta tccttagctc cttttggtct ctttttcacg 600

tttccagcaa aaatccatat catcctttnc agagctgaaa cagttatcat cttcaaatgt 660
gtcaatcagc tcttcaaatt ctttcatcat ccacgtcctt ctaatacttt cttcaatctg 720
catccccgtt tttggnttct cttttaanca gcaacttttt ttatnaaacc ctgggggaaa 780
aaac 784

<210> 464
<211> 850
<212> DNA
<213> Homo Sapiens

<400> 464
caggcatcgg ccaccggaac agcctggaga gcatctcttc catcgaccgg gagctgagcc 60
ctgagggccc aggcaaggag aaggagctgc ctggacagac cctgcactgg gggcccgagg 120
ccacagaagc cgcaggtcgg ggtctgcagc ccctgaagct ggactaccgc gccctggccg 180
ccgtgcccag cgctggcagc gtgcagaggg taccgtctgg agcagctgga gggaagatgg 240
ctgaatctcc ctgctccgct agtggccagc agccgccctc cccgccttct ccggatgagc 300
tgcccgccaa tgtgaagcag gcctacaggg ccttcgcggc cgtgcccact tctcacccgc 360
ctgaggatgc ccctgcccag ccccccacgc ctgggcctgc agcctccccg gagcagctgt 420
ccttccggga gcggcagaag tactttgagc tggaggtgcg cgtgccccag gccgagggcc 480
cccctaagcg cgtgtccctg gtgggtgctg acgacctgcg gaagatgcag gaggaggaag 540
ccagaaaact acagcagaag agagcgcaga tgctgcggga ggcggcagaa gctggggccg 600
aagcgaggct ngccctggac ggggagacgc tgggcgagga ggaacaggan gatgagcagc 660
caccctgggc cagcccgagc cccacttaag gcagaacccg gcgtcccccc ggccctggaa 720
gtggcgcccc ggtgcggacg gncaaaagct gaacggggcc ancaggaacc ggttgccctt 780
canagtnccg gacccaccgg gaccccancg tgccctggtc ccttgcccaa cttccgggcc 840
ctggaaggcc 850

<210> 465
<211> 759
<212> DNA
<213> Homo Sapiens

<400> 465
aaaatgtagt caactttatt ctccttaaac cacaaaatag agtctttggt tgtacaaaca 60
tcactagtta cagtctcgcc gaggtctcgg ctggggtggg gcagttagtt agtcacaggc 120
cagaactcct gtggggtctc tttaaaatgc taacacccag gttaaaagac ttggggcaag 180
ggtggtgctg gagctggcag ggcccccacc ccaagtctgg gggaggtgcc tgctcctcta 240
ggagggcaca gggcccaggc cacggcgccc aggccttacg gggcggcggc tgctgcacag 300
tgccacatct tcagggccca cagcgccggg tgagggcctg cccagaagca ccagagccac 360
ttntccatcc tcctcctgcg ggccagggct gggagatggt tccagggacc tcaactcctc 420
agcaaagtcc ggtgacaggc gtcccgggga ggtgctggtc tgggggccga ggtcttccac 480
aggggtgggc gacggggtgg gcgcagggga aggggcctcg gccagtcgct ccaggggccc 540
ccgcgtgccc cggcctttct gggacctgct gaggaccatc tgggctcngg aaagcgtcct 600
tgttccaatg acttcatcct ggctgccctt cacagngcac gcttntcggc ttcagggccc 660
ggagctttgg cangggaca aggcaacgct tcgggtgccc ggtgggttcc ggacttttga 720
acgcgccaan ccggttcctt ggngggcgcc cgtttcaac 759

<210> 466
<211> 1240
<212> DNA
<213> Homo Sapiens

<400> 466
gtggtagtgg tgccggagct ggaggcggag gcatgtttgg tagtggcggt ggaggagggg 60
gcactggaag tacaggtcca gggtatagct tcccacacta tggatttcct acttatggtg 120

ggattacttt ccatcctgga actactaaat ctaatgctgg gatgaagcat ggaaccatgg 180
acactgaatc taaaaaggac cctgaaggtt gtgacaaaag tgatgacaaa aacactgtaa 240
acctctttgg gaaagttatt gaaaccacag agcaagatca ggagcccagc gaggccaccg 300
ttgggaatgg tgaggtcact ctaacgtatg caacaggaac aaaagaagag agtgctggag 360
ttcaggataa cctctttcta gagaaggcta tgcagcttgc aaagaggcat gccaatgccc 420
ttttcgacta cgcggtgaca ggagacgtga agatgctgct ggccgtccag cgccatctca 480
ctgctgtgca ggatgagaat ggggacagtg tcttacactt agcaatcatc caccttcatt 540
ctcaacttgt gagggatcta ctagaagtca catctggttt gatttctgat gacattatca 600
acatgagaaa tgatctgtac cagacgccct tgcacttggc agtgatcact aagcaggaag 660
atgtggtgga ggatttgctg agggctgggg ccgacctgag ccttctggac cgcttgggta 720
actctgtttt gcacctagct gccaaagaag gacatgataa agttctcagt atcttactca 780
agcacaaaaa ggcagcacta cttcttgacc accccaacgg ggacggtctg aatgccattc 840
atctagccat gatgagcaat agcctgccat gtttgctgct gctggtggcc gctggggctg 900
acgtcaatgc tcaggagcag aagtccgggc gcacagcact gcacctggct gtggagcacg 960
acaacatctc attggcaggc tgcctgctcc tggagggtga tgcccatgtg gacagtacta 1020
cctacgatgg aaccacaccc ctgcatatag cagctgggaa agggtccacc aggctggcag 1080
ctcttcttaa agcagcagga gcagatcccc tggtgggaga ctttgagccc ttctatgacc 1140
tggatgactc ttgggaaaat gcaggaaaag gattgaagga gttggnctgg aancacgcct 1200
tttaganatg ggccnccaac tggcaggnat ttggcctatt 1240

<210> 467
<211> 885
<212> DNA
<213> Homo Sapiens

<400> 467
gtgccggagc tggaggcgga ggcatgtttg gtagtggcgg tggaggaggg ggcactggaa 60
gtacaggtcc agggtatagc ttcccacact atggatttcc tacttatggt gggattactt 120
tccatcctgg aactactaaa tctaatgctg ggatgaagca tggaaccatg gacactgaat 180
ctaaaaagga ccctgaaggt tgtgacaaaa gtgatgacaa aaacactgta aacctctttg 240
ggaaagttat tgaaaccaca gagcaagatc aggagcccag cgaggccacc gttgggaatg 300
gtgaggtcac tctaacgtat gcaacaggaa caaaagaaga gagtgctgga gttcaggata 360
acctctttct agagaaggct atgcagcttg caaagaggca tgccaatgcc cttttcgact 420
acgcggtgac aggagacgtg aagatgctgc tggccgtcca gcgccatctc actgctgtgc 480
aggatgagaa tggggacagt gtcttacact tagcaatcat ccaccttcat tctcaacttg 540
tgagggatct actagaagtc acatctggtt tgatttctga tgacattatc aacatgagaa 600
atgatctgta ccagacgccc ttgcacttgg cagtgatcac taagcaggaa gatgtggtgg 660
aggatttgct gagggctggg gcccgacctg agccttctgg acccgcttgg gtaactctgg 720
tttgcaccta gcttgcccaa agaaggacat gataaagttc tcaagtatct tacttaagcn 780
caaaaanggc agcactactt tnttgaccac ccccaacggg ggacggtctt gaatgccatt 840
catttaagcc atgatgagcc ataagcctgg catggtttgc tgctg 885

<210> 468
<211> 748
<212> DNA
<213> Homo Sapiens

<400> 468
gcaaatcaga gaaataacca cattagaaaa agcaatatgc ctttttttt aaaatggcac 60
atcaagtgac tctcatttta aaatatctct tttcttaacc cttaatttga atgcaaaatg 120
atgctgtggt cagaaggaat gccaggtggc gaccgtgata cctttaatga caataggaac 180
gtagcagagg gacaacagca atgacaacag aaagcagctg tgatccagca gcagctggca 240
aagcttagta agcaacctca tccccagatg catccgctca gccagtgttg tgattgctag 300
atactatctg taagtgaacc aaactaaaat tcatttatga accaagaaag gaagccaagt 360
tgaaaaggtc tcgagttaaa tcgagaatga ttcaggcggg ccggctctct gagcaccttt 420

ggatgcactt cagcttctgt cttgtggaaa cgcgtggaat tttagggctt tggtttacac 480
ggtgtgggaa attgtcagca ggctaaattt tgccttctag aggtccttcc tgcccataat 540
catggggcat tttgttgaga gttagcagtg aggcaccact ggtcagagac tcggtaaagc 600
tgagtttgcg gaaggatgtc tccacgccgc ttgtcgcaga cactgtcact ggcttcggag 660
ctcgnctatt tgctgccttg tggaggcagg cgaaanaagc agcgagtggg ccctgaaaag 720
gngggcnttc actgggctgg aaggcttg 748

<210> 469
<211> 770
<212> DNA
<213> Homo Sapiens

<400> 469
gcaaatcaga gaaataacca cattagaaaa agcaatatgc ctttttttt aaaatggcac 60
atcaagtgac tctcatttta aaatatctct tttcttaacc cttaatttga atgcaaaatg 120
atgctgtggt cagaaggaat gccaggtggc gaccgtgata cctttaatga caataggaac 180
gtagcagagg gacaacagca atgacaacag aaagcagctg tgatccagca gcagctggca 240
aagcttagta agcaacctca tccccagatg catccgctca gccagtgttg tgattgctag 300
atactatctg taagtgaacc aaactaaaat tcatttatga accaagaaag gaagccaagt 360
tgaaaaggtc tcgagttaaa tcgagaatga ttcaggcggg ccggctctct gagcaccttt 420
ggatgcactt cagcttctgt cttgtggaca acgcagtgga attttagggc tttggtttac 480
acggtgtggg aaattgtcag caggctaaat tttgccttct agaggtcctt cctgcccata 540
atcatggggc attttggtga gagntagcag tgaggcacca ctggtcagag acttcggtaa 600
agctgagttt gcgggaaagg atgtnttcca cgccgcttnt cgcanacact ggcactgnct 660
tgggagctcn gctattttgc ttgcccttgt ggangcaggc caaaanaagc caacgaatgg 720
ggccctgaaa aggngggcct tcanctgggc ttggaagctt gcctnggatc 770

<210> 470
<211> 892
<212> DNA
<213> Homo Sapiens

<400> 470
agagtgctgg agttcaggat aacctctttc tagagaaggc tatgcagctt gcaaagaggc 60
atgccaatgc ccttttcgac tacgcggtga caggagacgt gaagatgctg ctggccgtcc 120
agcgccatct cactgctgtg caggatgaga atggggacag tgtcttacac ttagcaatca 180
tccaccttca ttctcaactt gtgagggatc tactagaagt cacatctggt ttgatttctg 240
atgacattat caacatgaga aatgatctgt accagacgcc cttgcacttg gcagtgatca 300
ctaagcagga agatgtggtg gaggatttgc tgagggctgg ggccgacctg agccttctgg 360
accgcttggg taactctgtt ttgcacctag ctgccaaaga aggacatgat aaagttctca 420
gtatcttact caagcacaaa aaggcagcac tacttcttga ccaccccaac ggggacggtc 480
tgaatgccat tcatctagcc atgatgagca atagcctgcc atgtttgctg ctgctggtgg 540
ccgctggggc tgacgtcaat gctcaggagc agaagtccgg gcgcacagca ctgcacctgg 600
ctgtggagca cgacaacatc tcattggcag gctgcctgct cctggagggt gatgcccatg 660
tggacagtac tacctacgat ggaaccacac ccctgcatat agcagctggg aaagggtcca 720
ccaggctggc agctcttctt aaagcagcag gagcagatcc cctggtggga gactttgagc 780
ccttctatga cctggatgac tcttgggaaa atgcaggaaa aggattgaag gagttggnct 840
ggaancacgc cttttagana tgggccncca actggcaggn atttggccta tt 892

<210> 471
<211> 759
<212> DNA
<213> Homo Sapiens

<400> 471

gcaaatcaga gaaataacca cattagaaaa agcaatatgc ctttttttt aaaatggcac 60
atcaagtgac tctcatttta aaatatctct tttcttaacc cttaatttga atgcaaaatg 120
atgctgtggt cagaaggaat gccaggtggc gaccgtgata cctttaatga caataggaac 180
gtagcagagg gacaacagca atgacaacag aaagcagctg tgatccagca gcagctggca 240
aagcttagta agcaacctca tccccagatg catccgctca gccagtgttg tgattgctag 300
atactatctg taagtgaacc aaactaaaat tcatttatga accaagaaag gaagccaagt 360
tgaaaaggtc tcgagttaaa tcgagaatga ttcaggcggg ccggctctct gagcaccttt 420
ggatgcactt cagcttctgt cttgtggaca acgcagtgga attttagggc tttggtttac 480
acggtgtggg aaattgtcag caggctaaat tttgccttct agaggtcctt cctgcccata 540
atcatggggc attttgttga gagttagcag tgaggcacca ctggtcagag actcggtaaa 600
gctgagtttg cggaaggatg tctccacgcc gctgtccgca gacactgtca ctgnctcgga 660
gctcgtctat ttgctgcctt gtggaggcag gcgananagg caacgagtgg gccctgaaaa 720
gnggtcttca ctgggctgga agcttgnctg gatcacttt 759

<210> 472
<211> 852
<212> DNA
<213> Homo Sapiens

<400> 472
gtggtagtgg tgccggagct ggaggcggag gcatgtttgg tagtggcggt ggaggagggg 60
gcactggaag tacaggtcca gggtatagct tcccacacta tggatttcct acttatggtg 120
ggattacttt ccatcctgga actactaaat ctaatgctgg gatgaagcat ggaaccatgg 180
acactgaatc taaaaaggac cctgaaggtt gtgacaaaag tgatgacaaa aacactgtaa 240
acctctttgg gaaagttatt gaaaccacag agcaagatca ggagcccagc gaggccaccg 300
ttgggaatgg tgaggtcact ctaacgtatg caacaggaac aaaagaagag agtgctggag 360
ttcaggataa cctctttcta gagaaggcta tgcagcttgc aaagaggcat gccaatgccc 420
ttttcgacta cgcggtgaca ggagacgtga agatgctgct ggccgtccag cgccatctca 480
ctgctgtgca ggatgagaat ggggacagtg tcttacactt agcaatcatc caccttcatt 540
ctcaacttgt gagggatcta ctagaagtca catctggttt gatttctgat gacattatca 600
acatgagaaa tgatctgtac cagacgccct ttgcacttgg cagtgatcac taagcaggaa 660
gatgtggtgg aggatttgct gaagggctgg ggcccgacct tgagcctttc tggacccgct 720
tgggtaactc tgttttgcac cctaacttgc caaagaaggg cattgataaa ggtcttcaag 780
tatcttactt cagcccaaaa anggcagcac tacttntttg accaccccaa cgggggacgg 840
gcttgaatgc ca 852

<210> 473
<211> 804
<212> DNA
<213> Homo Sapiens

<400> 473
gcaaatcaga gaaataacca cattagaaaa agcaatatgc ctttttttt aaaatggcac 60
atcaagtgac tctcatttta aaatatctct tttcttaacc cttaatttga atgcaaaatg 120
atgctgtggt cagaaggaat gccaggtggc gaccgtgata cctttaatga caataggaac 180
gtagcagagg gacaacagca atgacaacag aaagcagctg tgatccagca gcagctggca 240
aagcttagta agcaacctca tccccagatg catccgctca gccagtgttg tgattgctag 300
atactatctg taagtgaacc aaactaaaat tcatttatga accaagaaag gaagccaagt 360
tgaaaaggtc tcgagttaaa tcgagaatga ttcaggcggg ccggctctct gagcaccttt 420
ggatgcactt cagcttctgt cttgtggaca acgcagtgga attttagggc tttggtttac 480
acggtgtggg aaattgtcag caggctaaat tttgccttct agaggtcctt ccttgcccat 540
aatcatgggg cattttgttg agagttagca gtgaggcacc acttggtcaa gagactcggt 600
naagctgagt tttgcggaag gatgtctcca cgcccgctgt cgcagacact gtcactgtct 660
tcggaactcg nctatttgct gncttgtgga agcaggcnaa nanaagcanc gaantggggc 720
cctgaaaagn gggtcttcac ttggnctgga aggcttgccc tgggatcnct ttnaatgggc 780

ttcggnggaa ccccattttg tctt 804

<210> 474
<211> 819
<212> DNA
<213> Homo Sapiens

<400> 474
ggctgggctg cgcttgggtc cgtcgctgct tcggtgtccc tgtcgggctt cccagcagcg 60
gcctagcggg aaaagtaaaa gatgtctgaa tatattcggg taaccgaaga tgagaacgat 120
gagcccattg aaataccatc ggaagacgat gggacggtgc tgctctccac ggttacagcc 180
cagtttccag gggcgtgtgg gcttcgctac aggaatccag tgtctcagtg tatgagaggt 240
gtccggctgg tagaaggaat tctgcatgcc ccagatgctg gctggggaaa tctggtgtat 300
gttgtcaact atccaaaaga taacaaaaga aaaatggatg agacagatgc ttcatcagca 360
gtgaaagtga aaagagcagt ccagaaaaca tccgatttaa tagtgttggg tctcccatgg 420
aaaacaaccg aacaggacct gaaagagtat tttagtacct ttggagaagt tcttatggtg 480
caggtcaaga aagatcttaa gactggtcat tcaaaggggt ttggctttgt tcgttttacg 540
gaatatgaaa cacaagtgaa agtaatgtca cagcgacata tgatagatgg acgatggtgt 600
gactgcaaac ttcctaattc taagcaaagc caagatgagc ctttgagaag cagaaaagtg 660
tttgtggggc gctgtcagag gacatgactg aggatgaagc tgcgggagtt cttcttttca 720
gtancgggga tgtgatggat ggtcttcatn cccaagccat tcagggcctt tggctttggt 780
catttgcaga tgaatcagat gcgccagtct ctttgtgga 819

<210> 475
<211> 721
<212> DNA
<213> Homo Sapiens

<400> 475
atttaaatca gttttattta agaatttcca acaatgacaa ctcttataaa aagcatccaa 60
gcacaggaca cagaactgca gcaaacagca ttcttatggg tagctaacag acattagaac 120
ttccaccctt ctttgagaca cctgagctca ctggtgaact ctgcttcaag tcctcctgca 180
aagcacacca caagctcagt ccatgttctc agcccatcag cttcagttca cattgccaca 240
cttacatatc agtaacagaa gagaacacac accatacagc attcacagca gttgacaaag 300
gggtaggggg agtacaagta tcatttcact taacacattc atctaatgtg ggttatctaa 360
gaacaaaaac tcacttaaaa gtcttccaac agatgtggat gtcctttgaa tgcaaaaaac 420
attcgtacat tatttgctat cattgctctc tgcacactct ctcaccaaag ccacaggatt 480
gagagacaca tctcgccaag ttaaaaaata tccattatgc accaccaagt ctctgcacgc 540
gctctctcct tttctcgctc atactagcct ttcatgcctc ggcaccacca tcaatcccac 600
acaaggtttc aaaagttcag acagccttct ggttccatat cacaggcctt gcgttcatag 660
cggtgatacg acttcctgga aattaagagt ancggataaa aatgggacac ccaccggtaa 720
a 721

<210> 476
<211> 442
<212> DNA
<213> Homo Sapiens

<400> 476
attnaaatca gtttnattna anantttcca ncanngncan ctntnataaa aggcntccan 60
ncncaggacn canancngca gcaancagcn ttntnanggg tagntancan acnttaaanc 120
ttccaccntt ntttganacn ccnganctna nngggganct nngnttcang ncctccngca 180
angcacacca cangctcagn ccatgttntn agcccatcag nttcagttna catngccaca 240
nttncntatc agtaccagaa gagaccncnc nccntncagc nttcncagca gtngncaaag 300
gggtaggggn agtccangta tcatttnant taccacattc atctaagggg ggttatctaa 360

naccaaaanc tcanttaaan gtnttccanc anangnggan gnccttngaa ngcaaaaanc 420
nttcgnccat nattggctat ca 442

<210> 477
<211> 878
<212> DNA
<213> Homo Sapiens

<400> 477
ggtggctggg ctgcgcttgg gtccgtcgct gcttcggtgt ccctgtcggg cttcccagca 60
gcggcctagc gggaaaagta aaagatgtct gaatatattc gggtaaccga agatgagaac 120
gatgagccca ttgaaatacc atcggaagac gatgggacgg tgctgctctc cacggttaca 180
gcccagtttc caggggcgtg tgggcttcgc tacaggaatc cagtgtctca gtgtatgaga 240
ggtgtccggc tggtagaagg aattctgcat gccccagatg ctggctgggg aaatctggtg 300
tatgttgtca actatccaaa agataacaaa agaaaaatgg atgagacaga tgcttcatca 360
gcagtgaaag tgaaaagagc agtccagaaa acatccgatt taatagtgtt gggtctccca 420
tggaaaacaa ccgaacagga cctgaaagag tattttagta cctttggaga agttcttatg 480
gtgcaggtca agaaagatct taagactggt cattcaaagg ggtttggctt tgttcgtttt 540
acggaatatg aaacacaagt gaaagtaatg tcacagcgac atatgataga tggacgatgg 600
tgtgactgca aacttcctaa ttctaagcaa agccaagatg agcctttgag aagcagaaaa 660
gtgtttgtgg ggcgctgtca gaggacatga ctgaggatga agctgcggga gttcttcttt 720
agtaccgggg atgtgatgga tgtctttatt ccccaagccc nttcaggggc ttttggcttt 780
ggtacatttg ccagatgatc agaatgccca gtctcttttg tggaaaagga ctttgatcat 840
ttaaagggaa tcagcggttc attatattcc aatggccc 878

<210> 478
<211> 768
<212> DNA
<213> Homo Sapiens

<400> 478
ggtgtcaaaa aaaaatttta tttatctggt tcaaaaaatt ttttagaatg aatgcattta 60
gattgaccaa atagattttt aaaaacaaat ctttgccaaa tagtttaagt acttttaaac 120
ttcaaaatct tcttagggta aaataaatac ccgtatctat gcagtaccat aaacatgtta 180
ataaaaggcc actcaacatt gaaagccttc tatgaccagt aactgaaatt tacacaagtg 240
taaagaaggg attaaaccat gccgttgaca agttaactta cccctgggct ccttgaaggc 300
ttgtcagttt agtctttgga ggtccccgag taccatttta agtgttacca tgttactgct 360
gctgagtaat agtgcaagtg cattttaggt gcggtcaccc agacttattc aaaactagat 420
ttcaaaagaa aaaaaaaaat tttcactttg gccaatgcaa gaacaaatac caattaagtc 480
tgggtatcag gtgtcaatgc atgacaggtg atgaatccat ttgacttgag acaacttttc 540
aaataagttt atttgaagca aaataaacta ctgccaagaa actttatgaa agttccatct 600
caaaagggtc aaaaaagggg aattaactgc tatgaattct ttgcattcag ggcgtcaaaa 660
gacgccggcc tgnggatgcc gtgatgacca attcttgaat gagaaagcat gtagaccgna 720
tttcctatgg cagaaatatt tacnggccta ctttcaatgg aagngctt 768

<210> 479
<211> 815
<212> DNA
<213> Homo Sapiens

<400> 479
gcgaagcggt ggctgggctg cgcttgggtc cgtcgctgct tcggtgtccc tgtcgggctt 60
cccagcagcg gcctagcggg aaaagtaaaa gatgtctgaa tatattcggg taaccgaaga 120
tgagaacgat gagcccattg aaataccatc ggaagacgat gggacggtgc tgctctccac 180
ggttacagcc cagtttccag gggcgtgtgg gcttcgctac aggaatccag tgtctcagtg 240

tatgagaggt gtccggctgg tagaaggaat tctgcatgcc ccagatgctg gctggggaaa 300
tctggtgtat gttgtcaact atccaaaaga taacaaaaga aaaatggatg agacagatgc 360
ttcatcagca gtgaaagtga aaagagcagt ccagaaaaca tccgatttaa tagtgttggg 420
tctcccatgg aaaacaaccg aacaggacct gaaagagtat tttagtacct ttggagaagt 480
tcttatggtg caggtcaaga aagatcttaa gactggtcat tcaaaggggt ttggctttgt 540
tcgttttacg gaatatgaaa cacaagtgaa agtaatgtca cagcgacata tgatagatgg 600
acgatggtgt gactgcaaac ttcctaattc taagcaaagc ccagatgaac ctttgagaag 660
cagaaaagtg tttgtggggg cgctgtacag angacatgac tgangataan cttcnggagt 720
tctttttta ataccgggat gtgatggatg cttcatttcc caacccattc agggcctttg 780
nctttggtac catttgcaga tgatcanatt gccca 815

<210> 480
<211> 812
<212> DNA
<213> Homo Sapiens

<400> 480
gtggtgtcaa aaaaaatttt atttatctgg ttcaaaaaat tttttagaat gaatgcattt 60
agattgacca aatagatttt taaaaacaaa tctttgccaa atagtttaag tacttttaaa 120
cttcaaaatc ttcttagggt aaaataaata cccgtatcta tgcagtacca taaacatgtt 180
aataaaaggc cactcaacat tgaaagcctt ctatgaccag taactgaaat ttacacaagt 240
gtaaagaagg gattaaacca tgccgttgac aagttaactt acccctgggc tccttgaagg 300
cttgtcagtt tagtctttgg aggtccccga gtaccatttt aagtgttacc atgttactgc 360
tgctgagtaa tagtgcaagt gcattttagg tgcggtcacc cagacttatt caaaactaga 420
tttcaaaaga aaaaaaaaaa ttttcacttt ggccaatgca agaacaaata ccaattaagt 480
ctgggtatca ggtgtcaatg catgacaggt gatgaatcca tttgacttga gacaactttt 540
caaataagtt tatttgaagc aaaataaact actgccaaga aactttatga aaagttccat 600
cttcaaaagg ggtcaaaaaa ggggaattaa ctgctatgaa ttctttgcat tcanggctgc 660
aaaacaaaga ccccatatta tttaaaatcc agtttattta agaatttncc accntggaca 720
acttcttatt aaaaaggcnt tccaggccca nggaccacag aaactgnang ccaaacangc 780
atttcttatg gggtagctta ccaggacctt tt 812

<210> 481
<211> 1127
<212> DNA
<213> Homo Sapiens

<400> 481
gaggacagca atttaatggc aaaggaaaga caagacaggc tgcgaaacac gatgctgctg 60
ccaaagcgtt gaggatcctg cagaatgagc ccctgccaga gaggctggag gtgaatggaa 120
gagaatccga agaagaaaat ctcaataaat ctgaaataag tcaagtgttt gagattgcac 180
ttaaacggaa cttgcctgtg aatttcgagg tggcccggga gagtggccca ccccacatga 240
agaactttgt gaccaaggtt tcggttgggg agtttgtggg ggaaggtgaa gggaaaagca 300
agaagatttc aaagaaaaat gccgccatag ctgttcttga ggagctgaag aagttaccgc 360
ccctgcctgc agttgaacga gtaaagccta gaatcaaaaa gaaaacaaaa cccatagtca 420
agccacagac aagcccagaa tatggccagg ggatcaatcc gattagccga ctggcccaga 480
tccagcaggc aaaaaaggag aaggagccag agtacacgct cctcacagag cgaggcctcc 540
cgcgccgcag ggagtttgtg atgcaggtga aggttggaaa ccacactgca gaaggaacgg 600
gcaccaacaa gaaggtggcc aagcgcaatg cagccgagaa catgctggag atccttggtt 660
tcaaagtccc gcaggcgcag cccaccaaac ccgcactcaa gtcagaggag aagacaccca 720
taaagaaacc aggggatgga agaaaagtaa ccttttttga acctggctct ggggatgaaa 780
atgggactag taataaagag gatgagttca ggatgcctta tctaagtcat cagcagctgc 840
ctgctggaat tcttcccatg gtgcccgagg tcgcccaggc tgtaggagtt agtcaaggac 900
atcacaccaa agattttacc agggcagctc cgaatcctgc caaggccacg gtaactgcca 960
tgatagcccg agagttgttg tatgggggca cctcgcccac agcccgagac cattttaaag 1020

aataacatct cttcaggcca cgtaccccat ggacctctca cgagaccctn tgagcaactg 1080
gactatcttt ncagagtcca gggattncag gttgaatacc aagactt 1127

<210> 482
<211> 773
<212> DNA
<213> Homo Sapiens

<400> 482
taccgccccc gcctgcagtt gaacgagtaa agcctagaat caaaaagaaa acaaaaccca 60
tagtcaagcc acagacaagc ccagaatatg gccaggggat caatccgatt agccgactgg 120
cccagatcca gcaggcaaaa aaggagaagg agccagagta cacgctcctc acagagcgag 180
gcctcccgcg ccgcagggag tttgtgatgc aggtgaaggt tggaaaccac actgcagaag 240
gaacgggcac caacaagaag gtggccaagc gcaatgcagc cgagaacatg ctggagatcc 300
ttggtttcaa agtcccgcag gcgcagccca ccaaacccgc actcaagtca gaggagaaga 360
cacccataaa gaaaccaggg gatggaagaa aagtaacctt ttttgaacct ggctctgggg 420
atgaaaatgg gactagtaat aaagaggatg agttcaggat gccttatcta agtcatcagc 480
agctgcctgc tggaattctt cccatggtgc ccgaggtcgc ccaggctgta ggagttagtc 540
aaggacatca caccaaagat tttaccaggg cagctccgaa tcctgccaag gccacggtaa 600
ctgccatgat agcccgagag ttgttgtatg ggggcacctc gcccacagcc cgagaccatt 660
ttaaagaata acatctcttc aggccacgta ccccatggac ctctcacgag accctntgag 720
caactggact atctttncag agtccaggga ttncaggttg aataccaaga ctt 773

<210> 483
<211> 794
<212> DNA
<213> Homo Sapiens

<400> 483
cattagtagc tgttnattga tcaanggttn gatataaagt tatttcanat cttcanactt 60
ttgcccagat ggaatcacaa gcattacaaa gttttttctt aaaaataaaa aaaggatagg 120
ggcaagttgg gaggggacca acctagcagt agnggcattt ganaataaat tancaaaaaa 180
atttagtatt accattnatt gatgacaaac acttaagttt tacttacatt ccatggggag 240
aaaaattcca gcgtaaacaa tgaatggaag cagtacttaa ctcgcagggc taccaggctt 300
tccatacgga ccacacgcag agcctcagng cacacacttc tgtgtncagt ancacaacat 360
caaaagcaac acagntgtat acagaaacgt aggtcattct tttcagccct aanggagatg 420
taattaacag tatcgagcac tntggaaaat cactctgcag gtttatatgg actacatgga 480
gatcatatcc tgtagtgtag tgaaagctaa gtcctcaaga gccatatgta tagatncaca 540
atgtttttta ataatcttta aaacagagat caaagttcat ttaagncctg tttgcattac 600
caaaaataaa aatgaaataa aaatggaacc aaatgaacat ctaangttta aaattcctaa 660
atnggccaat ttatncaact ggnggggaga cttattcaag ggttttgaaa gtccaggaac 720
tggtttcaag ctggaaccca ggggggcccc acaatttggc attcnctgga aactggccct 780
ggggttaagc caaa 794

<210> 484
<211> 788
<212> DNA
<213> Homo Sapiens

<400> 484
caagaccaga aggaaatgca cagttggata agatggggtt cacaattatc agaaaatgca 60
tcagtgccgt tgaaacacga ggtataaatg accaaggatt gtacagagtt gtgggggtga 120
gttcaaaggt ccagagactt ctgagtatgt tgatggatgt aaaaacatgc aatgaggtgg 180
acctggagaa ttctgcagat tgggaagtga agacaataac aagtgccttg aaacagtatt 240
tgaggagtct tccagagcct ctcatgacct atgagttaca tggagatttc attgttccag 300

ccaaaagcgg cagcccagaa tctcgtgtta atgcgatcca tttcttggta cacaaactgc 360
cagagaagaa taaagagatg ttggatattt tggtgaaaca cttaacaaat gtttcaaatc 420
actccaagca gaacctgatg actgtggcaa acttaggagt ggtgtttgga ccaactctga 480
tgaggccaca ggaagaaact gtcgctgcct catggacttg aagtttcaga atattgttgt 540
ggaaatctta attgaaaacc atgaaaagat ttttcggacg ccgnccgata ctacattccc 600
tgagcccacc tgcctgtcag catcaccccc aaatgcgcca ccaangcagt cnaagagaca 660
aggncagaga accaagaagg cccgtgggcc gtctacaatc tttggctgga gctggaaaga 720
tggtgacaat ccttaccctt tccanggagg acacccctta ccacagtctg gactcacttt 780
tcttcccg 788

<210> 485
<211> 430
<212> DNA
<213> Homo Sapiens

<400> 485
agtaaattac agtttatttc atttacagag accttgaggc aaaaaggtgg tgtttggaaa 60
acagcacacg ggtgaggagc accggagaag cctgttacaa atacgccagt gcacgctgcc 120
agtgcagtga gtgtggggtc ctgcaggtgg ccgtctagga agggcaggct tgagacgcgc 180
gtctctgctt ccctntgact tgagaccatc tcccttgnac caacagcagc ttntccaagc 240
taggctgcca cagccaagca cacactctgc aaacctatca ctgcgagtng tacagttccc 300
tttanaatcg nagcagcang tgctcaggga ggagagggag ccnnngtggc tctggtggcg 360
tgactgccag tgnaggcgga cacangtggc ataaggctgc ccgtcccctc tcattcttat 420
atgctgngat 430

<210> 486
<211> 831
<212> DNA
<213> Homo Sapiens

<400> 486
aaagtgtagt gccatcgaca caggctgtca cgttttcccc ttcttttcac aatcaagcaa 60
ttatggtgac aaaaccagtg caggaatata aaaaggaata cacagtgcag caggccttgt 120
tttgtacttc tggaattgtt acttctatac cggtgccctt ggcaggaagt gcccttctcc 180
catatcatat ttcatctact gcatgtcagg ccaaggctca tctgtcatct gatgatagta 240
attcaaatgg tgattctgcc caagtgcata ttgccacaaa aaacagagaa gaaaaagcag 300
cttgtctcag aaatatttgt ttaccttcag aacacaatcc aggtaatcag aatgatttta 360
aaccaactaa tgacgatatt gaaatgcaga gttcctcaaa attaccaaat gatcctgcaa 420
ttattagcaa cttttctgca gcagtggtgc atacgatagt aaatgaaact ttagagtcaa 480
tgacatcatt ggaagttaca aaaatggttg atgaacgtac agattattta actaaatctt 540
taaaggagaa aacccctcca ttttcccact gtgatcaggc agtgctgcaa tgcagtgaag 600
ctagtagcaa taaggacatg tttgctgacc ggttatctaa atctattatt aaacattcca 660
tagataagag caaatcagtg atcccaaata tagataaaaa tgcagtatac aaggaaagct 720
tgcctgtttc tggagaagaa tcacagttga cacccagaaa agtcttncca aatttnctga 780
ctcttcagaa tcagtttaac ttactggttc acttttagct gcaaaggaat g 831

<210> 487
<211> 728
<212> DNA
<213> Homo Sapiens

<400> 487
gacggagtct gtctctgtcg cccaggatgg agtacagtgg cacaatctca gctcactgca 60
atctctgcct cccaggttca agcaattctc ctgccttagc ctcccaagta gctgggatta 120
caggtgcctg ccaccacgcc tggctaattt ttgtattttt ggtagagacg gggtttcacc 180

atgttgccca ggctggtctt gaactcctga cctcaagtga tccaccccca cccccattgg 240
cttcccagag ttctgggatt acaggcgtga atcaccgcgc ccagcccaaa tcgccgaagt 300
ctttatctcc taccttgatc tctgtagcag aaaagaacag tatagatatc aattgtcatc 360
aacagatgca acatatcttg taaatcaata tattttcaag tgaggtctct gaatcacctg 420
cactgaaatc atctgtgatg cttatcaagc atgcagattc tcaggaccct tcactgactt 480
cataaatctt catctctgga ggtgagaccc tggacactgt atatgcaacg agcacaccac 540
caatcctgga tgagccccgc tttttctctg tgccagaacc ttaatgccac gcagcattac 600
attaagtcac attacaactt tggtcaatgg aaacacaggg tctttttctg acaaaatgcc 660
atcaagccag gtttggctcc ccacttaagt tcaaatnttt aatcattaat tttctgagcc 720
taaaatgc 728

<210> 488
<211> 788
<212> DNA
<213> Homo Sapiens

<400> 488
gtgggccctg tcctttctcc ccagctcctg ccccggagcc gggccctggc gaggcaggaa 60
tggccccgag gcctccgacc gccgcgcccc aggaatcagt gacattcaaa gatgtgtctg 120
tggacttcac ccaggaagaa tggtaccatg tcgaccctgc tcagaggagc ttatacaggg 180
atgtgatgct ggagaactat agccacctgg tttctcttgg atatcaagtt tccaagccag 240
aggtgatctt caaattggag caaggagaag agccatggat atcagaggga gaaatccaac 300
gacctttcta tccagactgg aagaccaggc ctgaagtcaa atcatcacat ttgcagcagg 360
atgtatcaga agtatcccac tgcacacatg atctcttaca tgctacatta gaagactcct 420
gggatgttag cagccagtta gacgggcaac aggaaaactg gaagagacat ctgggatcag 480
aggcatccac ccagaagaaa ataattacac cacaagaaaa ttttgagcaa aataaatttg 540
gtgaaaattc tagattgaac accaatttgg ttacacaact gaacattcct gcaagaataa 600
ggcctagtga atgtgagacc cttggaagca atttgggaca taatgcagac ttacttaatg 660
agaataatat tcttgcaaaa aagaaaccct tttagtgnga taatgtagaa aagnctttan 720
tcatagatca tcgnttacta aaccttgaga aaacccctta anggaaaagg gagctttcct 780
aatgggac 788

<210> 489
<211> 875
<212> DNA
<213> Homo Sapiens

<400> 489
aaagagatgg ggtttcacca tgttgtccag gctggtcttg aactctgggt tcaagcagtc 60
tatctgcctt agccacccaa agtgctggga ttacaggtgt gagacaccat acctagccaa 120
gttaattttt ttaatggtga aatcttttct ttgcacataa aatgagccag tgcatgttgc 180
ttctctgagt acaagacaaa atttatggca atgggcaatt agacttatac ttttctgcaa 240
gaaaattaac gggaaaattc tcctcttagt tttctgttgt tttcccattg atctgatact 300
gtaggcttaa gaaagtgctt tttcatgggc atgccataaa aagtacaata aggggactta 360
atagttctgt gaaactggca tatgttagct gaaagtataa ttgtaactgg gaaaagggga 420
aaaaagtcac tagtagttca accatctaca gtttctgtta aattgtggtt tgtaagcctc 480
caagaagttg ctttaaatag tttgtgataa atttgcatac attttgctcc cacttatact 540
tttaagaatt ctcaaagtgt ccaacccata ggtgcccatt aaatgtttgt gtatctgatc 600
atcttaaaat ttatttttaaa gccctctgag tcccaaaaat aacctttca ctggcaaggc 660
catggggccc caaatccagg aaaccctggc atttttaacc caacttttac ccttataggc 720
tggaatcata ctgngggaaa cccacttcac atcttttggc tttcagtctt caatctgncc 780
cnaatggaaa atgggttggg cctagttgga actaaattct tttgaatggg ggactttcct 840
ggaaattggg aactnggttt ccatggggga aagtt 875

<210> 490

<211> 844
<212> DNA
<213> Homo Sapiens

<400> 490
aagtgtttga gattgcactt aaacggaact tgcctgtgaa tttcgaggtg gcccgggaga 60
gtggcccacc ccacatgaag aactttgtga ccaaggtttc ggttggggag tttgtggggg 120
aaggtgaagg gaaaagcaag aagatttcaa agaaaaatgc cgccatagct gttcttgagg 180
agctgaagaa gttaccgccc ctgcctgcag ttgaacgagt aaagcctaga atcaaaaaga 240
aaacaaaacc catagtcaag ccacagacaa gcccagaata tggccagggg atcaatccga 300
ttagccgact ggcccagatc cagcaggcaa aaaaggagaa ggagccagag tacacgctcc 360
tcacagagcg aggcctcccg cgccgcaggg agtttgtgat gcaggtgaag gttggaaacc 420
acactgcaga aggaacgggc accaacaaga aggtggccaa gcgcaatgca gccgagaaca 480
tgctggagat ccttggtttc aaagtcccgc aggcgcagcc caccaaaccc gcactcaagt 540
cagaggagaa gacacccata aagaaaccag gggatggaag aaaagtaacc ttttttgaac 600
ctgctcttgg ggatgaaaat gggactagta ataaagagga tgagttcagg atgccttatc 660
taagtcatca gcagctgcct gctggaattc tttccatggt gcccgangtc gcccaagctg 720
taggaagtta gtcaaggaca tnacacccaa gattttacca ggcagcttcg aatcttgcca 780
nggcncngta ctgccatgat agcccanagt tgttgtattg gggcancttt gccccaggcc 840
ggga 844

<210> 491
<211> 825
<212> DNA
<213> Homo Sapiens

<400> 491
cattagtagc tgtttattga tcaatggttt gatataaagt tatttcanat cttcagactt 60
ttgcccagat ggaatcacaa gcattacaaa gtttttttctt aaaaataaaa aaaggatagg 120
ggcaagttgg gaggggacca acctagcagt agtggcattt gagaataaat taacaaaaaa 180
atttagtatt accatttatt gatgacaaac acttaagttt tacttacatt ccatggggag 240
aaaaattcca gcgtaaacaa tgaatggaag cagtacttaa ctcgcagggc taccaggctt 300
tccatacgga ccacacgcag agcctcagtg cacacacttc tgtgtacagt aacacaacat 360
caaaagcaac acagctgtat acagaaacgt aggtcattct tttcagccct aatggagatg 420
taattaacag tatcgagcac tctggaaaat cactctgcag gtttatatgg actacatgga 480
gatcatatcc tgtagtgtag tgaaagctaa gtcctcaaga gccatatgta tagatacaca 540
atgtttttta ataatcttta aaacagagat caaagttcat ttaaagtcct gtttgcatta 600
acaaaaataa aaatganaat aaaaatggac caaatgatca tctaaagttt aaaattccta 660
aatggtccaa tttatacaac tgggggagac ttattcaagg tttttgaaag tccaggactg 720
gtttcagctg aaccagangg cccccaattt gcatcactgg aactgncctg ggtttagcca 780
aggaaattaa aaaagnctta acccccttcc cctgggattt gaacc 825

<210> 492
<211> 946
<212> DNA
<213> Homo Sapiens

<400> 492
gaggacagca atttaatggc aaaggaaaga caagacaggc tgcgaaacac gatgctgctg 60
ccaaagcgtt gaggatcctg cagaatgagc ccctgccaga gaggctggag gtgaatggaa 120
gagaatccga agaagaaaat ctcaataaat ctgaaataag tcaagtgttt gagattgcac 180
ttaaacggaa cttgcctgtg aatttcgagg tggcccggga gagtggccca ccccacatga 240
agaactttgt gaccaaggtt tcggttgggg agtttgtggg ggaaggtgaa gggaaaagca 300
agaagatttc aaagaaaaat gccgccatag ctgttcttga ggagctgaag aagttaccgc 360
ccctgcctgc agttgaacga gtaaagccta gaatcaaaaa gaaaacaaaa cccatagtca 420

agccacagac aagcccagaa tatggccagg ggatcaatcc gattagccga ctggcccaga 480
tccagcaggc aaaaaaggag aaggagccag agtacacgct cctcacagag cgaggcctnc 540
cgcgccgcag ggagtttgtg atgcaggtga aggttggaaa ccacacttgc agaaggaacg 600
ggcaccaaca agaaggtggc caagcgcaat gcacccgaga acatgctgga gatccttggt 660
ttcaaaagtc ccgcangcgc agcccaccaa acccggactn aagtcagang agaagacccc 720
attaaggaaa ccangggatg gaagaaaagt ancnttttga anctggctnt tgggattaaa 780
atgggcttgt antaaagagg atgagttcag gatgncntat ctaagtcatn aacacttgct 840
gctggaaatc tttccatggg ggccgaggtc ncccagcttt taggagttat canggccntt 900
ccncccaaga attttcccgg gcagtttcca atctgccaag gccccg 946

<210> 493
<211> 804
<212> DNA
<213> Homo Sapiens

<400> 493
ggtctttatg tgcttaaata acgctgaatt ataattagcc acacaaataa tgagagtttt 60
attttttttt tctggctcac tccaaatcag cctgttaagg tatatttcct tctacagcct 120
ttcctgattt tgcatgttct cattcccaaa gtagtctacc ttagtttaca ctcaaaggta 180
gcacttgttg aaactacatg acagaaacag gctgcaaagg tggacaaggg gaagcatgtc 240
cctcttgtct tgataaatca gtgccacaca cagaacccac attttctgag acattatctt 300
cattatagag ccgtttgatt ccatcataga agtcatccac ttccatttcc tctactttgc 360
gtttagtaga ggtctgcttg cacccactgg cagctgggag atgatggtaa aaggctgctg 420
tacctctgac tggcacttct ggcttgctgt tgtccttgga gaagtctggg cctgggacag 480
aggagggatg taatctgaac actcctttgt cacaggtcac cagggtgtgc ttgaggggac 540
ggtagacata aacggaattc agaggcaggg aagactgcag agtanaaagg tgatgtgccc 600
aagcttccga ccatggatca actgggagct atncatctgg ctttctgaag cagntcaatt 660
gtaagagaaa gcccaatccn ggaatggagt tcntccattt tcagactaac cctgggcncn 720
aagcaaggca tgggatcccc tggaattgcc anaaanttgg gttgcagggn ccatacncgg 780
nggnaagtaa ttngctttgg gtaa 804

<210> 494
<211> 856
<212> DNA
<213> Homo Sapiens

<400> 494
gaaaggttgg aaagaataaa tagggccagg gaacaaggat ggagaaatgt gctaagtgct 60
ggtggaagtg gtgaagtaaa ggctcctttt ctgggcagtg gagggactat agctccatca 120
tctttttctt ctcgaggaca gtatgaacat taccatgcca tttttgacca aatgcagcaa 180
caaagagcag aagataatga agctaaatgg aaaagagaaa tatatggtcg aggtcttcca 240
gaaaggcaaa aagggcagct agctgtagaa agagctaaac aagtagaaga gttcctgcag 300
cgaaaacggg aagctatgca gaataaagct cgagccgaag gacatatggg aatcctgcaa 360
aacctggcag ctatgtatgg aggcaggccc agctcttcaa gaggagggaa gccaagaaac 420
aaagaggaag aggtttatct ggcaagactg aggcaaataa gactacagaa tttcaatgag 480
cgccaacaga ttaaagccaa acttcgtggt gaaaagaaag aagctaatca ttctgaagga 540
caagaaggaa gtgaagaggc tgacatgagg cgcaaaaaaa atcgaatcac tgaaggccca 600
tgcaaatgca cgtgctgctg tctaaaagaa cactagaacg aaagagaaag gaggcttatg 660
agagagaaaa aaaagtgtgg gaagagcatt tggtggctaa aggagttaag agtctgatgg 720
ttcttcccct ttgggaccag catgaaacaa ggtggctttt ccttcaaagc caccggatga 780
aaanctggta nttctggnac ttcacttttn aagaanttgg ccgtggnngt agtttaactg 840
gatacccggg aacttc 856

<210> 495
<211> 757

<212> DNA
<213> Homo Sapiens

<400> 495
agataataaa aatttaatag caatatcata aaataaacac acatattaaa aaatcaagta 60
tttagtttcg gatattagaa ataatataca taataaattc aacatactga tagtgctgca 120
agataagatt ttatttttca aattacatat tatgccaacc agcctgcttt ggactcagag 180
gttcaaaaac tttgctttta ttacgaagaa catntggact gtagacacct ntaacgaaac 240
caggttatac ttggcatatt gngattgaag ctgtgtgatc aacatcttaa tgacctaact 300
aaatcctntc ataacagaaa gaagttcaac aggcaaacat ttccctccct aggatcctag 360
ttaccaaaac tgtcacagng ncaaaataaa aataattatt tcctcctttt taacatctta 420
ttgnccttga agcttatgta tggaggaagt taaaaaccaa aagagcaact ttaagctata 480
tgctaagtca gngttaaatc cacagactaa tttttcgata tagnattcct ggntctggnc 540
cttaaagaga aataaaggca ttaaaccact tttttatatg tcaaggaaat ataatttngc 600
tattctttca taatcaaatc tttcaatgga tttctaagac tggnttctac agcctgngng 660
ctagttccag gggacacact gattgtaaaa nggacttggn ggaaatntaa aactttaagg 720
gctaaaaaat ttcatctttc aaaatgntnt agatgtt 757

<210> 496
<211> 1759
<212> DNA
<213> Homo Sapiens

<400> 496
cgaggatcca ggcgcaggag gacagagcaa tgggtgagag aactcttcac gctgcagtgc 60
ccacaccagg ttatccagaa tctgaatcca tcatgatggc ccccatttgt ctagtggaaa 120
accaggaaga gcagctgaca gtgaattcaa aggcattaga gattcttgac aagatttctc 180
agcccgtggt ggtggtggcc attgtagggc tataccgcac aggaaaatcc tatctcatga 240
atcgtcttgc aggaaagcgc aatggcttcc ctctgggctc cacggtgcag tctgaaacta 300
agggcatctg gatgtggtgt gtgccccacc tctctaagcc aaaccacacc ctggtccttc 360
tggacaccga gggcctgggc gatgtagaaa agagtaaccc taagaatgac tcgtggatct 420
ttgccctggc tgtgcttcta agcagcagct ttgtctataa cagcgtgagc accatcaacc 480
accaggccct ggagcagctg cactatgtga ctgagctagc agagctaatc agggcaaaat 540
cctgccccag acctgatgaa gctgaggact ccagcgagtt tgcgagtttc tttccagact 600
ttatttggac tgttcgggat tttaccctgg agctaaagtt agatggaaac cccatcacag 660
aagatgagta cctggagaat gccttgaagc tgattccagg caagaatccc aaaattcaaa 720
attcaaacat gcctagagag tgtatcaggc atttcttccg aaaacggaag tgctttgtct 780
ttgaccggcc tacaaatgac aagcaatatt taaatcatat ggacgaagtg ccagaagaaa 840
atctggaaag gcatttcctt atgcaatcag acaacttctg ttcttatatc ttcacccatg 900
caaagaccaa gaccctgaga gagggaatca ttgtcactgg aaagcggctg gggactctgg 960
tggtgactta tgtagatgcc atcaacagtg gagcagtacc ttgtctggag aatgcagtga 1020
cagcactggc ccagcttgag aacccagcgg ctgtgcagag ggcagccgac cactatagcc 1080
agcagatggc ccagcaactg aggctcccca cagacacgct ccaggagctg ctggacgtgc 1140
atgcagcctg tgagagggaa gccattgcag tcttcatgga gcactccttc aaggatgaaa 1200
accatgaatt ccagaagaag cttgtggaca ccatagagaa aaagaaggga gactttgtgc 1260
tgcagaatga agaggcatct gccaaatatt gccaggctga gcttaagcgg ctttcagagc 1320
acctgacaga aagcattttg agaggaattt tctctgttcc tggaggacac aatctctact 1380
tagaagaaaa gaaacaggtt gagtgggact ataagctagt gcccagaaaa ggagttaagg 1440
caaacgaggt cctccagaac ttcctgcagt cacaggtggt tgtagaggaa tccatcctgc 1500
agtcagacaa agccctcact gctggagaga aggccatagc agcggagcgg gccatgaagg 1560
aagcagctga gaaggaacag gagctgctaa gagaaaaaca gaaggagcag cagcaaatga 1620
tggaggctca agagagaagc tttcaggaat acatggncca aatggagaag aagttggagg 1680
angaaaggga aaaccntntc agagagcctt gaaaaggttg ctaaaacaca agcttgaagg 1740
tncagaagaa aatgcttaa 1759

<210> 497
<211> 842
<212> DNA
<213> Homo Sapiens

<400> 497
atgacaagca atatttaaat catatggacg aagtgccaga agaaaatctg gaaaggcatt 60
tccttatgca atcagacaac ttctgttctt atatcttcac ccatgcaaag accaagaccc 120
tgagagaggg aatcattgtc actggaaagc ggctggggac tctggtggtg acttatgtag 180
atgccatcaa cagtggagca gtaccttgtc tggagaatgc agtgacagca ctggcccagc 240
ttgagaaccc agcggctgtg cagagggcag ccgaccacta tagccagcag atggcccagc 300
aactgaggct ccccacagac acgctccagg agctgctgga cgtgcatgca gcctgtgaga 360
gggaagccat tgcagtcttc atggagcact ccttcaagga tgaaaaccat gaattccaga 420
agaagcttgt ggacaccata gagaaaaaga agggagactt tgtgctgcag aatgaagagg 480
catctgccaa atattgccag gctgagctta agcggctttc agagcacctg acagaaagca 540
ttttgagagg aattttctct gttcctggag gacacaatct ctacttagaa gaaaagaaac 600
aggttgagtg ggactataag ctagtgccca gaaaaggagt taaggcaaac gaggtcctcc 660
agaacttcct gcagtcacan gtggttgtag aggaatccat cctgcagtca gacaaagccc 720
tcactgctgg agagaaggcc atacaaccgg aaccgggcca tgaaggaagc acttgagaag 780
gaacaggagc tgcttagaga aaaaccgaag gagccagcag ccaaatggat ggaggctcaa 840
ga 842

<210> 498
<211> 707
<212> DNA
<213> Homo Sapiens

<400> 498
gagcaataaa gctttttaat cacctgggtg caggctggct gagtccgaaa agacagtcag 60
tgaagggaga tagggttggg accattttac aggatttggg ttggtaaagg aaaattacag 120
tcaaaggggg ttgttctctg gcgggcagag gtgggtgtca caagttgctt agtgggggag 180
cttttgagcc aggatgagcc aggagaagga atttcacaag gtaatgtcat cagttaaggc 240
aggaacaggc cattttcact tcttttgtga ttcttcactt gcttcaggcc atctggacgt 300
atgtacatgc aggtcacagg ggatatgatg gcttagcttg ggctcagagg cctgacattt 360
agtatattta ctggaatatt caggctctta aatacgtgag ccaagatatt ttgtccctac 420
tccaagtagc ttggaagccc caggtagagt gacaatcatt atgttgctag ccatgtcaag 480
gatctttaag agccttaact gttcattttt agtgctttca attttttctt tcagttgatt 540
aatctcttta tttaactgct cagatttctt ttgaaattct tccttaagca tttcttcttg 600
naccttcagc ttggggttta acagcctttc atgctctctg aaaagggttt nccttttcctn 660
cttcaacttc ttctccattt gggccatgna ttcctggaag cttctct 707

<210> 499
<211> 772
<212> DNA
<213> Homo Sapiens

<400> 499
gtggagcagt accttgtctg gagaatgcag tgacagcact ggcccagctt gagaacccag 60
cggctgtgca gagggcagcc gaccactata gccagcagat ggcccagcaa ctgaggctcc 120
ccacagacac gctccaggag ctgctggacg tgcatgcagc ctgtgagagg gaagccattg 180
cagtcttcat ggagcactcc ttcaaggatg aaaaccatga attccagaag aagcttgtgg 240
acaccataga gaaaaagaag ggagactttg tgctgcagaa tgaagaggca tctgccaaat 300
attgccaggc tgagcttaag cggctttcag agcacctgac agaaagcatt ttgagaggaa 360
ttttctctgt tcctggagga cacaatctct acttagaaga aaagaaacag gttgagtggg 420
actataagct agtgcccaga aaaggagtta aggcaaacga ggtcctccag aacttcctgc 480

agtcacaggt ggttgtagag gaatccatcc tgcagtcaga caaagccctc actgctggag 540
agaaggccat agcagcggag cgggccatga aggaagcagc tgagaaggaa caggagctgc 600
taagagaaaa acagaaggag cagcagcaaa tgatggaggc tcaagagaga agctttcagg 660
aatacatggn ccaaatggag aagaagttgg aggangaaag ggaaaaccnt ntcagagagc 720
cttgaaaagg ttgctaaaac acaagcttga aggtncagaa gaaaatgctt aa 772

<210> 500
<211> 787
<212> DNA
<213> Homo Sapiens

<400> 500
ggctgttttt agtttttct tgatttcaaa tcttcttttc aacacctccc tcttctctat 60
gcgattgaac agttcttgct ctctctcttt ctctgtcatc tgttccagac gggccctgtc 120
ttcctcatct cccatgaggt cttctccata gccatcatgg aactcttcat cttctgagga 180
agagtctgaa tctgaactgg aagaggagct gttgctgtca gagtctgaca cttcaccttc 240
ctcaggggct gagctctcag ctgaactgtc tttgtctgaa ctgcctgagg aggcagtttt 300
gttggcctgt ttcttcatgg ttccttttctt ctctattttt ctggcttttc ctttcttctt 360
atttttctcg tgccgaattc ggcacgagga actattcgag ttttttttt ttttttttt 420
tgagacggag tctcgctccg tcgcccaggc tggagtgcag cggcgcgatc tcgactcact 480
gcaagctccg cctcccgggc ccacgccatt ctcccgcccc agcctcccgt gtagctggga 540
ctacaggcgc gtgccaccac gcccggccaa tttttgcatt tttagcanag acggggtttc 600
accgggttag ccaggaaggg ctcgatcccc tgacctcgng atccacccgt cttggcctcc 660
caaagtgctg ggacccacag gcaatgagtt ggatttttaa ctactgggtt taaggccagg 720
caggccccag gcctgggttt tgggcctggc nctggcctgn ccggccttgg gtttaccttc 780
ctggggg 787

<210> 501
<211> 886
<212> DNA
<213> Homo Sapiens

<400> 501
agttntnacc gctcgnctcg cgcgcctgca ggtcgacact agtggatcca aagcgggatt 60
ttaccctgga gctaaagtta gatggaaacc ccatcacaga agatgagtac ctggagaatg 120
ccttgaagct gattccaggc aagaatccca aaattcaaaa ttcaaacatg cctagagagt 180
gtatcaggca tttcttccga aaacggaagt gctttgtctt tgaccggcct acaaatgaca 240
agcaatattt aaatcatatg gacgaagtgc cagaagaaaa tctggaaagg catttcctta 300
tgcaatcaga caacttctgt tcttatatct tcacccatgc aaagaccaag accctgagag 360
agggaatcat tgtcactgga aagcggctgg ggactctggt ggtgacttat gtagatgcca 420
tcaacagtgg agcagtacct tgtctggaga atgcagtgac agcactggcc cagcttgaga 480
acccagcggc tgtgcagagg gcagccgacc actatagcca gcagatggcc cagcaactga 540
ggctccccac agacacgctc caggagctgc tggacgtgca tgcagcctgt gagagggaag 600
ccattgcagt cttcatggag cactccttca aggatgaaaa ccatgaattc cagaagaagc 660
ttgtggacac catagagaaa aagaagggag actttgtgct gcagaatgaa gaggcatctg 720
ccaaatattg ccaggctgac ttaagcggct ttcagagcac ctgacagaaa gcattttgag 780
aggaattttc tctggtcctg gaggacacaa tctctactta gaagaaagga aacaggntga 840
gtggggacta ttagctagtg nccagaaaag gagttaaggc aaacga 886

<210> 502
<211> 626
<212> DNA
<213> Homo Sapiens

<400> 502

gggagcaata aagcttttta atcacctggg ngcaggctgg ctgagtccna aaagacagtc 60
agngaaggga nanagggttg ggaccatttt acaggatttg ggttggtaaa ggaaaattac 120
ngtcaaaggg ggttgttctn tggcgggcaa agggggngngt cacaagttgc ttannggggg 180
anctttgag ccaggatgan ccnggaaaag gaatttcnca aggnaatggc atcagttaag 240
gcaggaacag gccattttca cttnttttgg gantcttcac ttgcttcagg ccatntggaa 300
nattcaggct nttaaanacn ngagccnana nattttggcc ctactccaag tagcttggaa 360
nccccaggta aagggacnat cattatgntg ctagccntgt caaggatntt taaaagcctt 420
aactggncat ttttanggct ttcaattttt tnttttagtn gattaancnc tttatttaac 480
ngctcaaatt tcttttgaaa ntnttcctta agcntttctt cttgnccttn ancttgggnt 540
ttancagcct ttcatgcnct ttgaaaaggn tttccctttc ctcctccaac ttcntctcca 600
tttggggcca tgntattncc tgggaa 626

<210> 503
<211> 884
<212> DNA
<213> Homo Sapiens

<400> 503
cgaggatcca ggcgcaggag gacagagcaa tgggtgagag aactcttcac gctgcagtgc 60
ccacaccagg ttatccagaa tctgaatcca tcatgatggc ccccatttgt ctagtggaaa 120
accaggaaga gcagctgaca gtgaattcaa aggcattaga gattcttgac aagatttctc 180
agcccgtggt ggtggtggcc attgtagggc tataccgcac aggaaaatcc tatctcatga 240
atcgtcttgc aggaaagcgc aatggcttcc ctctgggctc cacggtgcag tctgaaacta 300
agggcatctg gatgtggtgt gtgccccacc tctctaagcc aaaccacacc ctggtccttc 360
tggacaccga gggcctgggc gatgtagaaa agagtaaccc taagaatgac tcgtggatct 420
ttgccctggc tgtgcttcta agcagcagct ttgtctataa cagcgtgagc accatcaacc 480
accaggccct ggagcagctg cactatgtga ctgagctagc agagctaatc agggcaaaat 540
cctgccccag acctgatgaa gctgaggact ccagcgagtt tgcgagtttc tttccagact 600
ttatttggac tgttcgggat tttaccctgg agctaaagtt agatggaaac cccatcacag 660
aagatgagta cctggagaat gccttgaagc ttgantncag gcaagaatnc caaaantcaa 720
aattcaaaca tgcctagaga gtgnattaag gcantttctt ccgaaaaccg gaagtgcttt 780
tgcctttgac cgggctacaa atggacaagc caatatttaa aatcattntg gacnaantgc 840
cngaagaaaa tctggaaagg catttcctta tgccatcaga caac 884

<210> 504
<211> 612
<212> DNA
<213> Homo Sapiens

<400> 504
gagacggagt ttcgctctgt cgcccaggct ggagtgcagt ggcgcgatct cgactcactg 60
caagctccgc ctcctgggtt cacgccattc tcctgcctca gcctcccgtg tagctgggac 120
tacaggcgcg tgccaccatg cccggctaat ttttgtattt ttagtagaga cggggtttca 180
ccgtgttagc caggatggtc tcgatctcct gacctcgtga tccacccgtc tcggcctccc 240
aaagtgctgg gattacaggc aatgagttga tttttaacta ctgggtttag gccaggcagg 300
cccaggcctg gttttgggcc tggcgctggg ctgcctgtct ttggttttac ttccttggtg 360
nttttttcta aaacaggtac tgagtatcaa acaatataaa acaatataag aaggtctctc 420
tcttccctca attctagctg caagttttga gcactagaca gcagaaataa attcctaaaa 480
tgttgagttg agcaaatagt tcaatgctat ccctatcaaa ctaccaatga cattntttac 540
nagaaattag aaactacttt aaaaatttca tatgggaacn aaaaaagagc cttacccnag 600
gcnaanccta aa 612

<210> 505
<211> 2215
<212> DNA

<213> Homo Sapiens

<400> 505

ctcagatgct cactgcagtc caagagatct cccatctcat tgagccgctg gccaatgctg 60
cccgggctga agcctcccag ctgggacaca aggtgtccca gatggcgcag tactttgagc 120
cgctcaccct ggctgcagtg ggtgctgcct ccaagaccct gagccacccg cagcagatgg 180
cactcctgga ccagactaaa acattggcag agtctgccct gcagttgcta tacactgcca 240
aggaggctgg tggtaaccca aagcaagcag ctcacaccca ggaagccctg gaggaggctg 300
tgcagatgat gaccgaggcc gtagaggacc tgacaacaac cctcaacgag gcagccagtg 360
ctgctggggt cgtgggtggc atggtggact ccatcaccca ggccatcaac cagctagatg 420
aaggaccaat gggtgaacca gaaggttcct tcgtggatta ccaaacaact atggtgcgga 480
cagccaaggc cattgcagtg actgttcagg agatggttac caagtcaaac accagcccag 540
aggagctggg ccctcttgct aaccagctga ccagtgacta tggccgtctg gcctcggagg 600
ccaagcctgc agcggtggct gctgaaaatg aagagatagg ttcccatatc aaacaccggg 660
tacaggagct gggccatggc tgtgccgctc tggtcaccaa ggcaggcgcc ctgcagtgca 720
gccccagtga tgcctacacc aagaaggagc tcatagagtg tgcccggaga gtctctgaga 780
aggtctccca cgtcctggct gcgctccagg ctgggaatcg tggcacccag gcctgcatca 840
cagcagccag cgctgtgtct ggtatcattg ctgacctcga caccaccatc atgttcgcca 900
ctgctggcac gctcaatcgt gagggtactg aaactttcgc tgaccaccgg gagggcatcc 960
tgaagactgc gaaggtgctg gtggaggaca ccaaggtcct ggtgcaaaac gcagctggga 1020
gccaggagaa gttggcgcag gctgcccagt cctccgtggc gaccatcacc cgcctcgctg 1080
atgtggtcaa gctgggtgca gccagcctgg gagctgagga ccctgagacc caggtggtac 1140
taatcaacgc agtgaaagat gtagccaaag ccctgggaga cctcatcagt gcaacgaagg 1200
ctgcagctgg caaagttgga gatgaccctg ctgtgtggca gctaaagaac tctgccaagg 1260
tgatggtgac caatgtgaca tcattgctta agacagtaaa agccgtggaa gatgaggcca 1320
ccaaaggcac tcgggccctg gaggcaacca cagaacacat acggcaggag ctggcggttt 1380
tctgttcccc agagccacct gccaagacct ctaccccaga agacttcatc cgaatgacca 1440
agggtatcac catggcaacc gccaaggccg ttgctgctgg caattcctgt cgccaggaag 1500
atgtcattgc cacagccaat ctgagccgcc gtgctattgc agatatgctt cgggcttgca 1560
aggaagcagc ttaccaccca gaagtggccc ctgatgtgcg gcttcgagcc ctgcactatg 1620
gccgggagtg tgccaatggc tacctggaac tgctggacca tgtactgctg accctgcaga 1680
agccaagccc agaactgaag cagcagttga caggacattc aaagcgtgtg gctggttccg 1740
tcactgagct catccaggct gctgaagcca tgaagggaac agaatgggta gacccagagg 1800
accccacagt cattgctgag aatgagctcc tgggagctgc agccgccatt gaggctgcag 1860
ccaaaaagct agagcagctg aagccccggg ccaaacccaa ggaggcagat gagtccttga 1920
actttgagga gcagatacta gaagctgcca agtccattgc agcagccacc agtgcactgg 1980
taaaggctgc gtcggctgcc agagagaact agtggcccaa gggaaagtgg gtgccattcc 2040
aagcaatgca ctggacgatg ggcagtggtc ccangggcct catttctgct gcccngatgg 2100
tggcttgcgg ccaccaacaa nttgtgtgaa ggcagccaat gcaactgtcc aagggcatgc 2160
caagccngga anaactnatn ttattcagcc caacaggtaa cttgcctttc acaag 2215

<210> 506
<211> 742
<212> DNA
<213> Homo Sapiens

<400> 506

ggcacgaggt aacccaaagc aagcagctca cacccaggaa gccctggagg aggctgtgca 60
gatgatgacc gaggccgtag aggacctgac aacaaccctc aacgaggcag ccagtgctgc 120
tggggtcgtg ggtggcatgg tggactccat cacccaggcc atcaaccagc tagatgaagg 180
accaatgggt gaaccagaag gttccttcgt ggattaccaa acaactatgg tgcggacagc 240
caaggccatt gcagtgaccg ttcaggagat ggttaccaag tcaaacacca gcccagagga 300
gctgggccct cttgctaacc agctgaccag tgactatggc cgtctggcct cggaggccaa 360
gcctgcagcg gtggctgctg aaaatgaaga gataggttcc catatcaaac accgggtaca 420
ggagctgggc catggctgtg ccgctctggt caccaaggca ggcgccctgc agtgcagccc 480

cagtgatgcc tacaccaaga aggagctcat agagtgtgcc cggagagtct ctgagaaggt 540
ctcccacgtc ctggctgcgc tccaggctgg gaatcgtggc acccaggcct gcatcacagc 600
agccagcgct gtgtctggta tcattgctga cctcgacacc accatcatgt tcgccacttg 660
ctggcacgct caatcgtgag ggtactgaaa ctttcgctga ccaccgggan ggcatnctga 720
agactgcgaa ngtgctggtg ga 742

<210> 507
<211> 735
<212> DNA
<213> Homo Sapiens

<400> 507
gtaggtagaa tcatttttat tggagcatga cctgtttggg gcttataact ctgcagcccc 60
tatgggtagc tgggggtggg ggaagatagt atcaaaaaac ggtgaagaga gctgatgagg 120
ctgtggggac tggctggaag ctgctggcag ggtggagtgg gctggggccc cggcagattc 180
agatcgaggt acagcagcgt taataatact cttggagcgt taatactctg gggaggggca 240
ggcacttggg gggccctagg gcatgaaggc acttggggtt ggggagggga caggggatgt 300
actgcgggac tgggcggggc caggccctgg ggtttggcag gcactttggg gagtgctggg 360
gttgggcagg ttgggccccg acagcccaga aggctttggt agtggcacgc acagtctctg 420
ggccgggtct gcattaaata gaagaggctt ctttagtgct catctcgaag ctctgaaggc 480
agaaacttgt actgctgctg ccggatctgg gccagtttct tccgngcctc ttccagctct 540
cgttccttcc gaagcatttc ttcctgngct gcgatgatct gggcaatgcc cgccaaccat 600
cttctcttta ccaccactgg cttnattctc ctgctcttca aaggctgcaa ccttctgggc 660
tgntttnacc agattatctg angctcgctt cactgngttg ncagcaacct tgaatccgtt 720
tcatttgccc tccag 735

<210> 508
<211> 666
<212> DNA
<213> Homo Sapiens

<400> 508
gtaggtagaa tcatttttat tggagcatga cctgtttggg gcttataact ctgcagcccc 60
tatgggtagc tgggggtggg ggaagatagt atcaaaaaac ggtgaagaga gctgatgagg 120
ctgtggggac tggctggaag ctgctggcag ggtggagtgg gctggggccc cggcagattc 180
agatcgaggt acagcagcgt taataatact cttggagcgt taatactctg gggaggggca 240
ggcacttggg gggccctagg gcatgaaggc acttggggtt ggggagggga caggggatgt 300
actgcgggac tgggcggggc caggccctgg ggtttggcag gcactttggg gagtgctggg 360
gttgggcagg ttgggccccg acagcccaga aggctttggt agtggcacgc acagtctntg 420
ggccgggtct gcattaaata gaagaggctt ctttagtgct catctngaag ctctgaaggc 480
agaaacttgt actgctgctg ccggatctgg gccagttttc ttccgcgcct tttccagctc 540
tcgttccttt ccgaagcatt tcttcctgng ctgccatgat tctgggccat gcccgccaac 600
catcttctct tttacccanc attggcttna ttctcctgct ctttcaaaag gcttgnagnc 660
tttctg 666

<210> 509
<211> 818
<212> DNA
<213> Homo Sapiens

<400> 509
ctcagatgct cactgcagtc caagagatct cccatctcat tgagccgctg gccaatgctg 60
cccgggctga agcctcccag ctgggacaca aggtgtccca gatggcgcag tactttgagc 120
cgctcaccct ggctgcagtg ggtgctgcct ccaagaccct gagccacccg cagcagatgg 180
cactcctgga ccagactaaa acattggcag agtctgccct gcagttgcta tacactgcca 240

aggaggctgg tggtaaccca aagcaagcag ctcacaccca ggaagccctg gaggaggctg 300
tgcagatgat gaccgaggcc gtagaggacc tgacaacaac cctcaacgag gcagccagtg 360
ctgctggggt cgtgggtggc atggtggact ccatcaccca ggccatcaac cagctagatg 420
aaggaccaat gggtgaacca gaaggttcct tcgtggatta ccaaacaact atggtgcgga 480
cagccaaggc cattgcagtg actgttcagg agatggttac caagtcaaac accagcccag 540
aggagctggg ccctcttgct aaccagctga ccagtgacta tggccgtctg gcctcggagg 600
ccaagcctgc agcggtggct gctgaaaatg aagagatagg ttccatatca aacaccgggt 660
acaggagctg ggccatggct tgtgccgctc tggtcaccaa ngcangcgcc ctgantgcaa 720
gcccagtgat gcctacccaa gaaggagctc atagagtgtg cccggagaag tttttgaaag 780
gtcttccacg tnctggttgg cttcaagctt gggaatcg 818

<210> 510
<211> 651
<212> DNA
<213> Homo Sapiens

<400> 510
gtaggtagaa tcatttttat tggagcatga cctgtttggg gcttataact ctgcagcccc 60
tatgggtagc tgggggtggg ggaagatagt atcaaaaaac ggtgaagaga gctgatgagg 120
ctgtggggac tggctggaag ctgctggcag ggtggagtgg gctggggccc cggcagattc 180
agatcgaggt acagcagcgt taataatact cttggagcgt taatactctg gggaggggca 240
ggcacttggg gggccctagg gcatgaaggc acttggggtt ggggagggga caggggatgt 300
actgcgggac tgggcggggc caggccctgg ggtttggcag gcactttggg gagtgctggg 360
gttgggcagg ttgggccccg acagcccana aggctttggt agtggcacgc acagtctctg 420
ggccgggtct gcattaaata gaagaggctt ctttagtgct catctcgaag ctctgaaggc 480
aanaaacttg tactgctgct gcncggatct gggccanttt cttccgcgcc tcttccanct 540
ctcgttcctt ccgaagcatt tcttcctggc tgccgatgat ctggncaatg ccgccaacca 600
tcttctcttt caccaccact tggctcaatt cttcctggct ctttcaaagg c 651

<210> 511
<211> 712
<212> DNA
<213> Homo Sapiens

<400> 511
gtaggtagaa tcatttttat tggagcatga cctgtttggg gcttataact ctgcagcccc 60
tatgggtagc tgggggtggg ggaagatagt atcaaaaaac ggtgaagaga gctgatgagg 120
ctgtggggac tggctggaag ctgctggcag ggtggagtgg gctggggccc cggcagattc 180
agatcgaggt acagcagccg ttaataatac tcttggagcg ttaatactct ggggaggggc 240
aggcacttgg ggggccctag ggcatgaagg cacttggggt tggggagggg acaggggatg 300
tactgcggga ctgggcgggg ccaggccctg gggtttggca ggcactttgg ggagtgctgg 360
ggttgggcag gttgggcccc gacagcccag aaggctttgg tagtggcacg cacagtctct 420
gggccgggtc tgcattaaat agaagaggct tctttagtgc tcatctcgaa gctctgaagg 480
cagaaacttg tactgctgct gccggatctg ggccagtttc ttccgcgcct cttccagctc 540
tcgttccttc cgaagcattt cttcctgtgc tgccgatgat ctgggcaatg cccggcaacc 600
atcttctctt ttaccaccac tgggctcatt ctcctgctct tcaaaangct gcagcccttt 660
tgggctgntt ttcaccagaa ttaatcttga ngcntcgctt tnacttgcgt tg 712

<210> 512
<211> 850
<212> DNA
<213> Homo Sapiens

<400> 512
aggagctggc ggttttctgt tccccagagc cacctgccaa gacctctacc ccagaagact 60

tcatccgaat gaccaagggt atcaccatgg caaccgccaa ggccgttgct gctggcaatt 120
cctgtcgcca ggaagatgtc attgccacag ccaatctgag ccgccgtgct attgcagata 180
tgcttcgggc ttgcaaggaa gcagcttacc acccagaagt ggcccctgat gtgcggcttc 240
gagccctgca ctatggccgg gagtgtgcca atggctacct ggaactgctg gaccatgtac 300
tgctgaccct gcagaagcca agcccagaac tgaagcagca gttgacagga cattcaaagc 360
gtgtggctgg ttccgtcact gagctcatcc aggctgctga agccatgaag ggaacagaat 420
gggtagaccc agaggacccc acagtcattg ctgagaatga gctcctggga gctgcagccg 480
ccattgaggc tgcagccaaa aagctagagc agctgaagcc ccgggccaaa cccaaggagg 540
cagatgagtc cttgaacttt gaggagcaga tactagaagc tgccaagtcc attgcagcag 600
ccaccagtgc actggtaaag gctgcgtcgg ctgccagaga gaactagtgg cccaagggaa 660
agtgggtgcc attccaagca atgcactgga cgatgggcag tggtcccang ggcctcattt 720
ctgctgcccn gatggtggct tgcggccacc aacaanttgt gtgaaggcag ccaatgcaac 780
tgtccaaggg catgccaagc cnggaanaac tnatnttatt cagcccaaca ggtaacttgc 840
ctttcacaag 850

<210> 513
<211> 727
<212> DNA
<213> Homo Sapiens

<400> 513
gtaggtagaa tcatttttat tggagcatga cctgtttggg gcttataact ctgcagcccc 60
tatgggtagc tgggggtggg ggaagatagt atcaaaaaac ggtgaagaga gctgatgagg 120
ctgtggggac tggctggaag ctgctggcag ggtggagtgg gctggggccc cggcagattc 180
agatcgaggt acagcagcgt taataatact cttggagcgt taatactctg gggaggggca 240
ggcacttggg gggccctagg gcatgaaggc acttggggtt ggggagggga caggggatgt 300
actgcgggac tgggcggggc caggccctgg ggtttggcag gcactttggg gagtgctggg 360
gttgggcagg ttgggccccg acagcccana aggctttggt agtggcacgc acagtctctg 420
ggcccgggtc tgcattaaat agaagaggct tctttagtgc tcatctcgaa gctctgaagg 480
cagaaacttg tactgctgct gccggatctg ggccangttt cttccgngcc tcttccagct 540
tctcgttcct tccgaaagca tttcttnctg tgcttgcnat gaatcntggg caatgcccgn 600
ccaacccatc ttctctttca ccaccactgg tctnatttct cctnngtcnt tcaaaaggct 660
tgcaagcctt ctgggctggc ctttcaccca ganttaattt naagnctcgc tttacttggg 720
tttgcca 727

<210> 514
<211> 877
<212> DNA
<213> Homo Sapiens

<400> 514
cagcagccag cgctgtgtct ggtatcattg ctgacctcga caccaccatc atgttcgcca 60
ctgctggcac gctcaatcgt gagggtactg aaactttcgc tgaccaccgg gagggcatcc 120
tgaagactgc gaaggtgctg gtggaggaca ccaaggtcct ggtgcaaaac gcagctggga 180
gccaggagaa gttggcgcag gctgcccagt cctccgtggc gaccatcacc cgcctcgctg 240
atgtggtcaa gctgggtgca gccagcctgg gagctgagga ccctgagacc caggtggtac 300
taatcaacgc agtgaaagat gtagccaaag ccctgggaga cctcatcagt gcaacgaagg 360
ctgcagctgg caaagttgga gatgaccctg ctgtgtggca gctaaagaac tctgccaagg 420
tgatggtgac caatgtgaca tcattgctta agacagtaaa agccgtggaa gatgaggcca 480
ccaaaggcac tcgggccctg gaggcaacca cagaacacat acggcaggag ctggcggttt 540
tctgttcccc agagccacct gccaagacct ctaccccaga agacttcatc cgaatgacca 600
agggtatcac catggcaacc gccaagccgt tgctgctgca attcctgtcg ccaggaagat 660
gtcattgcca cagccaatct gagcccgccg tgctattgca gatatgcttc ggctttgcaa 720
ggaagcagct taccacccag aagtgggccc tgatgtgcgg nttcaancct gnactatggc 780
ccggagtgtg ccaatggcta cctgggaact ggttggacca ttgtacttgg tgacccttgc 840

aaaagcccag ccccagaact tgaagccagc agtttgc 877

<210> 515
<211> 685
<212> DNA
<213> Homo Sapiens

<400> 515
gtaggtagaa tcatttttat tggagcatga cctgtttggg gcttataact ctgcagcccc 60
tatgggtagc tgggggtggg ggaagatagt atcaaaaaac ggtgaagaga gctgatgagg 120
ctgtggggac tggctggaag ctgctggcag ggtggagtgg gctggggccc cggcagattc 180
agatcgaggt acagcagcgt taataatact cttggagcgt taatactctg gggaggggca 240
ggcacttggg gggccctagg gcatgaaggc acttggggtt ggggagggga caggggatgt 300
actgcgggac tgggcggggc caggccctgg ggtttggcag gcactttggg gagtgctggg 360
gttgggcagg ttgggccccg acagcccaaa aggctttggt agtggcacgc acagtctctg 420
ggccgggtct gcattaaata gaagaggctt ctttagtgct catctcgaaa ctcttgaagg 480
cagaaacttt gtactgctgc ttgccggatc tgggccagtt tcttccgcgc ctcttcagct 540
tntcgttcct ttccgaancc atttctttcc tgngcttgcc natgaatctt gggcaaatgc 600
ccgccaaccc atcttctctt ttcaccccac cacctggnct cattctcctg ctcttcaaaa 660
ngcttgcaac cctttcttgg ngctn 685

<210> 516
<211> 790
<212> DNA
<213> Homo Sapiens

<400> 516
ggttaacata cgaagaaaga atggctcgtc gactgctagg tgctgacagt gcaactgtct 60
ttaatattca ggagccagaa gaggaaacag ctaatcagga atacaaagtc tccagctgtg 120
aacagagact catcagtgaa atagagtaca ggctagaaag gtctcctgtg gatgaatcag 180
gtgatgaagt tcagtatgga gatgtgcctg tggaaaatgg aatggcacca ttctttgaga 240
tgaagctgaa acattacaag atctttgagg gaatgccagt aactttcaca tgtagagtgg 300
ctggaaatcc aaagccaaag atctattggt ttaaagatgg gaagcagatc tctccaaaga 360
gtgatcacta caccattcaa agagatctcg atgggacctg ctccctccat accacagcct 420
ccaccctaga tgatgatggg aattatacaa ttatggctgc aaaccctcag ggccgcatca 480
gttgtactgg acggctaatg gtacaggctg tcaaccaaag aggtcgaagt ccccggtctc 540
cctcaggcca tcctcatgtc agaaggcctc gttctagatc aagggacagt ggagacgaaa 600
atgaaccaat tcaggagcga ttcttcagac ctcacttctt gcaggctcct ggagatctga 660
ctgttcaaga aggaaaactc tgcagaatgg actgcaaagt cagtgggtta ccaaccccca 720
gatctaagct ggcaactaga tggaaagccc gtacgccctg acagtgctca caagaaagcc 780
tggtgcctga 790

<210> 517
<211> 747
<212> DNA
<213> Homo Sapiens

<400> 517
atagtcaaag gtatgtttct gccttttaca tantgtgaca aaggaatatg ttggtcaagg 60
caatggctgt ttcagtgttt cagctttaac aagaatgctg gattacaggt cctcactttc 120
taccaaggca gtattcagtg tcaggtgaga tgggttggcc tcaggttgga acgctgcttt 180
gatgtctagt ccctggtccg aaagtgctgc atagcgactg gctgagggcc gtacttttt 240
tggcttggtg ctctgtgact gctgatgcca ctgggtgtaa acgtccagcc tggcagtaca 300
ggacacaatc cctgcttcat tcttggctga cacagtatac cacccagcat cttcttttgt 360
ggctccctga atgagcaggc agatgtagcc gtggttgtcc tggtgcatgc tcactcggtc 420

agtgctgtga gtgagtgatt cattttcttt cttccaaaat atctgaggtg gtggcactcc 480
caatacacga cattccagcc gcactgggta cccatcagca actcctgtgt tttggagctt 540
ctcaataaac acaggggggtt tgtgtgcttc tttagcagca accacaagct ccaggctgaa 600
tgagttctgt cctgctcggt tggtagctat acatgtgtag atgccggcat cacgtgacgt 660
gactggctct atgatcagag agtgcacccc gttctttacg caccagcatc ttgggagccc 720
tgtcaaggcg taccggcttt ccatcta 747

<210> 518
<211> 926
<212> DNA
<213> Homo Sapiens

<400> 518
agaaagcaga gccttctgaa gttgacatga attctcctaa atccaaaaag gcaaaaaaga 60
aagaggagcc atctcaaaat gacatttctc ctaaaaccaa aagtttgaga aagaaaaagg 120
agcccattga aaagaaagtg gtttcttcta aaaccaaaaa agtgacaaaa aatgaggagc 180
cttctgagga agaaatagat gctcctaagc ccaagaagat gaagaaagaa aaggaaatga 240
atggagaaac tagagagaaa agccccaaac tgaagaatgg atttcctcat cctgaaccgg 300
actgtaaccc cagtgaagct gccagtgaag aaagtaacag tgagatagag caggaaatac 360
ctgtggaaca aaaagaaggc gctttctcta attttcccat atctgaagaa actattaaac 420
ttctcaaagg ccgaggagtg accttcctat ttcctataca agcaaagaca ttccatcatg 480
tttacagcgg gaaggactta attgcacagg cacggacagg aactgggaag acattctcct 540
ttgccatccc tttgattgag aaacttcatg gggaactgca agacaggaag agaggccgtg 600
cccctcaggt actggttctt gcacctacaa gagagttggc aaatcaagta agcaaagact 660
tcagtgacat cacaaaaaaa gcttgtcagt gggcttggtt tttatggtgg aacttcctat 720
ggaggtcaat ttggaccgca tggangnaat gggaattgga taatcctggg ttggaacacc 780
angtcgtatc aaaggaccnc antacnggaa tgggcaaact aagatcttca cccaaacttt 840
aagccatgtt ggcccttggg atgaaagtgg ggncccagan tgtttgggaa atngggaatt 900
tgcttgatca aagtggggaa gaagaa 926

<210> 519
<211> 789
<212> DNA
<213> Homo Sapiens

<400> 519
acatactctt gagcaatgct aatctgcgcc ccttactccc ttaagtcctt cttggtaaat 60
aatgttaatc ttccaatagg aagaagtgga gtacattacc atttaagcac catttatcca 120
gcctacttac aaataaagct atggagccac cttatacatg tgaaattcct taaaaccctg 180
gctttctatt aaaatgtact tttatatata ctatctatga agaattcact aaagcatgaa 240
tcaccttata atgagaagct aaaaatgtat caaaacgaac ataagtatag gtaatccaca 300
tcaaacatac tacatcttcc aagtctagag catacactgg tataaactgt attacaaccc 360
agattagttt gaaatcttgt ttcaaaacat tgctcagtat taagtctcag tagacaaata 420
ataggaccac atgagaaact gttcggcagg tggctgagga aaccttaact tccaaaggct 480
caaagtggtc ctccagagac tgttacactc ccttaggtat ttatttcagg gaaggacact 540
attaagggac acttttgagt ataaagacag gtgaactcac aaagtatagg cagatcatgc 600
ttgattttat cttctaatct acaggataat acattagaat aaaaatgtaa tgaattcata 660
caccttttcaa aanggaaaaa ctggatgaag taacnnntaa agntataaat ggataatgga 720
tccggatgaa aataaatttt aaaatggaaa ccttggctgn gtctgaaaga agaccgggac 780
tttggcaag 789

<210> 520
<211> 827
<212> DNA
<213> Homo Sapiens

<400> 520
gtgatatagt gcttgtcatt ttaattgtaa catattacca aaaagcttta tatacatagc 60
tttatactat ttacattgca gtagaggaat ggcaatgcta acaggtgatc agtgcttcca 120
aacttttca atacctacac atgggagatc taaagagtac aatatattta agacttctaa 180
ggaattgttt tctcctcact aataaagcat gccctgacta aagagaagtc ctgtaggcac 240
agccttatct attcaatgac tggcacctcc caggggtact gacacacaaa gtgccttcac 300
tggaccttac agttctcact gcccttggac tccagtccag ctttggggct ggggacaagt 360
cggcctcgct tgaccctcag gccctctctg gggctgtcag tcggacttct ctcaggaaga 420
ttattgactg ggacggattt cgtggtgggt tctcggagga tggtgcctga atctactggg 480
ctccgctgag caactttgac cttttgtgat ctgctgccac cagctgttgg tttggaggac 540
tctgcaagat tttctttgcc gagactcagt ggggatagcg ctaacttctg tgcagccagg 600
cgggggctgg tccgagttgc catggttggt cttcgcagga tatatgggct aagtctttnc 660
tgtcgggatg tcagcaaacc ctttctttac aacttctgga agtccctctg gctcaaactt 720
agtaccttcg ngncttctgc anggtgaata ccactcatga ctgntttctt gctttttta 780
gaaaagctct ctggggtaac aggtgtgggn ccttcaccat tcttccc 827

<210> 521
<211> 710
<212> DNA
<213> Homo Sapiens

<400> 521
gtgatatagt gcttgtcatt ttaattgtaa catattacca aaaagcttta tatacatagc 60
tttatactat ttacattgca gtagaggaat ggcaatgcta acaggtgatc agtgcttcca 120
aacttttca atacctacac atgggagatc taaagagtac aatatattta agacttctaa 180
ggaattgttt tctcctcact aataaagcat gccctgacta aagagaagtc ctgtaggcac 240
agccttatct attcaatgac tggcacctcc caggggtact gacacacaaa gtgccttcac 300
tggaccttac agttctcact gcccttggac tccagtccag ctttggggct ggggacaagt 360
cggcctcgct tgaccctcag gccctctctg gggctgtcag tcggacttct ctcaggaaga 420
ttattgactg ggacggattt cgtggtgggt tctcggagga tggtgcctga atctactggg 480
ctccgctgag caactttgac cttttgtgat ctgctgccac cagctgttgg tttggaggac 540
tctgcaagat tttctttgcc gagactcagt ggggatagcg ctaacttctg tgcagccagg 600
cgggggctgg tccgaagttg ccatgggttg ntcttccagg atatatgggc taagnctttc 660
ctgtcgggat gtcagcaaaa ccctttcttt acaacttctg gaaagcccct 710

<210> 522
<211> 638
<212> DNA
<213> Homo Sapiens

<400> 522
atagngcttg tcattttaat tgtaacatat taccaaaaag ctttatatac atagctttat 60
actatttaca ttgcagtaga ggaatggcaa tgctaacagg tgatcagtgc ttccaaactt 120
tttcaatacc tacacatggg agatctaaag agtacaatat atttaagact tctaaggaat 180
tgttttctcc tcactaataa agcatgccct gactaaagag aagtcctgta ggcacagcct 240
tatctattca atgactggca cctcccaggg gtactgacac acaaagngcc ttcactggac 300
cttacagttc tcactgccct tggactccag tccagctttg gggctgggga caagtcggcc 360
tcgcttgacc ctnaggccct ctctggggct gtcagtcgga cttctntcag gaagattatt 420
gactgggacg gatttcgtgg tgggttctcg gaggatggtg cctgaatcta ctgggctccg 480
ctgagcaact ttgacctttt gngatctgct gccaccagct gttggtttgg aggactntgc 540
aagattttct ttgccgagac ttantggggg atagcgctaa cttctggngc agccangcgg 600
gggctggtcc naanttgcca tggntgntct tcncagga 638

<210> 523
<211> 833

<212> DNA
<213> Homo Sapiens

<400> 523
cgacacttag accgagtgga ctccatcctg ctcacccaca ttggggatga caatttgcct 60
ggaataaaca gcatgttaca gcggaaaatt gcagagctcg aggaagaaca gtcccagggc 120
tccaccacaa atagtgactg gatgaaaaac ctcatctccc ctgacttagg agttgtattt 180
ctcaatgtac ctgaaaatct caaaaatcca gagccaaaca tcaagatgaa gagaagcata 240
gaagaagcct gcttcactct ccagtaccta aacaaattgt ccatgaaacc agaacctctg 300
tttagaagtg taggcaatac tattgatcct gtcattcttt tccaaaaaat gggagtaggt 360
aaacttgaga tgtatgtgct taatccagtc aagagcagca aggaaatgca gtattttatg 420
cagcagtgga ctggtaccaa caaagacaag gctgaattca ttctgcctaa tggtcaagaa 480
gtagatctcc cgatttccta cttaacttca gtctcatctt tgattgtgtg gcatccagca 540
aaccctgcgg agaaaatcat ccgagtcctg tttcctggga acagcaccca gtacaacatc 600
ctggaagggt tggaaaagct caaacatcta gactttctga agcagccact ggccacccaa 660
aaggatctca ctggccaggt gcccactcct gtggtgaaac aaacaaaact gaacagaggg 720
cttgatagcc gagaaagtct gaagcccagc cgcaaaanca ctttctagca aaatccggcg 780
ccaaggagtc aaaagaagaa acccctgagg tcacaaaagg tggaatcacg tgg 833

<210> 524
<211> 766
<212> DNA
<213> Homo Sapiens

<400> 524
cacttccttc ttctcttcct tcttaacttc cttcttgact tcctttggcg gtgtttcttt 60
cttaacctct ttcttgggtt ctttttttctc ttctttcttg atctcttttt tgacttcttt 120
tttcacctct tcctttttttg gtttttcctc cttcttgata ggtgttttgt cctcctttt 180
agccacttct ttctttggct tttctttctc ctctttcttg tcttcaggct ttacctttgt 240
ttcctttttc accgtcttct ccttggcagc tttgggtttg acatctgtgg cttgcttctc 300
agccacctcg gctttcactg gagatggctc ttctttgctg ggaacctcct tttcagtcac 360
tgaaggtttg gtctctgttt ttattggctt gtctttttttc accattacct tttctttgct 420
ttcaactttg ggtggctttt ccacgtgatt cacttttgtg acctcagggg tttcttcttt 480
tgactccttg cgcacggatt tgctaggaag tggttttgcg gctggcttca gactttctcg 540
gctatcagcc ctctgtttca gttttgtttg tttcaccaca ggagtgggca cctggccagt 600
gaganccttt tgggtggcca gtggctggtt cagaaagtct aaanggtttg aggcttttnc 660
aacctttcag gaatggtgga ccggggtgct ggtcccagga aacaggactc ggatggattt 720
ttctccccaa gggtttgctg gaagccccca caaatcaaag gaagga 766

<210> 525
<211> 847
<212> DNA
<213> Homo Sapiens

<400> 525
cagcagccgg caggatggcg accgtggtgg tggaagccac cgagccggag ccgtccggca 60
gcatcgccaa cccggcggcg tccacctcgc ctagcctgtc gcaccgcttc cttgacagca 120
agttctactt gctggtggtc gtcggcgaga tcgtgaccga ggagcacctg cggcgtgcca 180
tcggcaacat cgagctcgga atccgatcat gggacacaaa cctgattgaa tgcaacttgg 240
accaagaact caaacttttt gtatctcgac actctgcaag attctctcct gaagtcccag 300
gacaaaagat ccttcatcac cgaagtgacg ttttagaaac agtggtcctg atcaaccctt 360
ctgatgaagc agtcagcacc gaggtgcgct taatgatcac tgatgctgcc cgacacaagc 420
tgctcgtgct gaccgggcag tgctttgaaa ataccggaga gctcattctc cagtccggct 480
ctttctcctt ccagaacttc atagagattt tcaccgatca agagatcggg gagttactaa 540
gcaccaccca tcctgccaac aaagccagct taaccctgtt ctgtcctgaa gaaggggact 600

ggaagaactc caatcttgac agacacaatc tccaagactt catcaatatt aaactcaatt 660
cagcttctat cttgccagaa atggaaggac tttctgagtt taccgagtat ctctcagaat 720
caagtggaag tcccatctcc ttttgacatc ttgggaacct tccacatcgg gtggatttct 780
gaagcttttc caagccctgt ggtataattt ttccaggang gaagggccaa ttttgccttg 840
gttgcaa 847

<210> 526
<211> 746
<212> DNA
<213> Homo Sapiens

<400> 526
cttgatctct tttttgactt ctttttcac ctcttccttt tttggttttt cctccttctt 60
gataggtgtt ttgtcctcct ttttagccac ttctttcttt ggcttttctt tctcctcttt 120
cttgtcttca ggctttacct ttgtttcctt tttcaccgtc ttctccttgg cagctttggg 180
tttgacatct gtggcttgct tctcagccac ctcggctttc actggagatg gctcttcttt 240
gctgggaacc tccttttcag tcactgaagg tttggtctct gttttattgg cttgtctttt 300
ttcaccatta ccttttcttt gctttcaact ttgggtggct tttccacgtg attcactttt 360
gtgacctcag gggtttcttc ttttgactcc ttgcgcacgg atttgctagg aagtggtttt 420
gcggctggct tcagactttc tcggctatca gccctctgtt tcagttttgt ttgtttcacc 480
acaggagtgg gcacctggcc agtgagatcc ttttgggtgg ccagtggctg cttcagaaag 540
tctagatgtt tgagcttttc caacccttcc aggatgttgt actgggtgct gttcccagga 600
aacaggactc ggatgatttt ctcccgcagg gtttgctgga agccacacaa tcaaagatga 660
gaactgaaag taaagtangg aaatcgggaa gaactacttc ttggaccatt taggcagaaa 720
ggaattcagc ccttggcttt ggtggg 746

<210> 527
<211> 837
<212> DNA
<213> Homo Sapiens

<400> 527
cacttccttc ttctcttcct tcttaacttc cttcttgact tcctttggcg gtgtttcttt 60
cttaacctct ttcttgggtt ctttttttctc ttctttcttg atctcttttt tgacttcttt 120
tttcacctct tcctttttttg gtttttcctc cttcttgata ggtgttttgt cctcctttt 180
agccacttct ttctttggct tttctttctc ctctttcttg tcttcaggct ttacctttgt 240
ttcctttttc accgtcttct ccttggcagc tttgggtttg acatctgtgg cttgcttctc 300
agccacctcg gctttcactg gagatggctc ttctttgctg ggaacctcct tttcagtcac 360
tgaaggtttg gtctctgttt ttattggctt gtctttttttc accattacct tttctttgct 420
ttcaactttg ggtggctttt ccacgtgatt cacttttgtg acctcagggg tttcttcttt 480
tgactccttg cgcacggatt tgctaggaag tggttttgcg gctggcttca gactttctcg 540
gctatcagcc ctctgtttca agttttgttt gnttcaccac aggagtgggc acctggccag 600
tgagaccttt tgggtggcca agtggctgct tcagaaaagt ctagaaggtt tgagcctttt 660
ccaacccttc caggaaggtt gggacctggg tgctggttcc canggaaacc aggacctcgg 720
gatgaatttt ctcccgcaag ggtttgcctg gaatgccccn acaatccaaa gaatgaaanc 780
tgaaagttta antagggaaa atccgggaga aactaccttc ntggaccatt naggccc 837

<210> 528
<211> 822
<212> DNA
<213> Homo Sapiens

<400> 528
ctcgggacgt gaaattgaca gtgaaaagta tggcagatga gcaagaaatc atgtgcaaat 60
tggaaagcat taaagagatc aggaacaaga ccctgcagat ggagaagatc aaggctcgtt 120

tgaaggctga gtttgaggca cttgagtcag aggaaaggca cctgaaggaa tacaagcagg 180
agatggacct tctgctacag gagaagatgg cccatgtgga ggaactccga ctgatccacg 240
ctgacatcaa tgtgatggaa aacactatca aacaatctga gaatgaccta aacaagctgc 300
tagagtctac aaggaggctg catgatgagt ataagccact gaaagaacat gtggatgccc 360
tgcgcatgac tctgggcctg cagaggctcc ctgacttgtg tgaagaagag gagaagcttt 420
ccttggatta ctttgagaag cagaaagcag aatggcagac agaacctcag gagccccca 480
tccctgagtc cctggccgct gcagcccgct gccgcccaac agctccaagt ggctaggaag 540
caggatactc ggcagacggc caccttcagg cagcagcccc cacctatgaa ggcctgcttg 600
tcatgtcacc agcaaattca ccggaatgca cctatatgcc ctctttgcaa ggccaagagt 660
cggtcccgga accccaaaaa gccgaacgga agcaggatga ataaaggaaa gggagagccc 720
atgaagcttt gctaattata acccccttcac cttgaccaga gtcattgatg tcctgatgtg 780
aaacaaccct tggcccaacc ccacgaagtc tcctatttaa tg 822

<210> 529
<211> 842
<212> DNA
<213> Homo Sapiens

<400> 529
actttcaaag agcagaggaa cattttatat agtgaacaca tacacacttg gcaatgtaaa 60
actacttaag gaaggaaaaa tatccccctc cccagccagg tactgagacc tggggctaaa 120
atttttttgtc agtcagcccc catccccatc ccttatcttc gagtgacctt accaggaaac 180
ctggctttgg tggaaaggag agctgtgggg cttggggagc ctgatgcctt ttcttttggg 240
aggaaaggca cctgcacaat ccacaggaca ggagtggcca gcagctatcc tgagctgagg 300
ctccagaaga gttcagatcc aagagagcaa gggatgaatg gaaggaaagt cccacccacc 360
ttcatgtgta aagtgattgg catttactca aatctaaatc tactcctctc ctccctgcaa 420
tataccattg agcatgtgcc agagtaatgg ttctgaacaa aagccaacac agatgtcagc 480
ctgggggcac tctcagccaa ggaagcccct acagccgagc cctcagccct aatgacttag 540
gcagtaggtt aggcaggaga tgtagaagtt ggtctggctc actgatttca ctgtggaaat 600
cttctactag aatttgcaaa gactagatat tggggaaagg ttcattgatc ttaagaatcc 660
caagacacac agcctagtac ctaagaattt taagtatatg tggggagaca gaagtgggag 720
aaagctaaag aattaccggc catgccttcc aaatgattat gaaaanggag ggcttggtcc 780
aagcttacct ttgggccttt aaggatgaan atgangggta ggaagtangg gggatacatg 840
cc 842

<210> 530
<211> 815
<212> DNA
<213> Homo Sapiens

<400> 530
ggaaaaggga gaaagatagg gagaaatatt cccaaagaga acaagaaaga gatagacaac 60
aaaatgatca gaaccgaccc agtgagaaag gagagaagga agagaaaagc aaagcaaagg 120
aagagcatat gaaagtaagg aaggaaagat atgaaaataa tgataaatac agagatagag 180
aaaaacgaga ggtaggtgtt cagtcttcag aaagaaatca agacagaaag gaaagcagcc 240
caaattctag ggcaaaggat aaatttcttg accaagaaag atccaacaaa atgagaaaca 300
tggcaaagga caaagaaaga aaccaagaga aaccctctaa ttctgaatca tcactgggag 360
caaaacacag actcacagag gaagggcaag agaagggtaa agaacaagag agaccacctg 420
aggcagtgag caagtttgca aagcggaaca atgaagaaac tgtaatgtca gctagagaca 480
ggtacttggc caggcagatg gcgcgggtta atgcaaagac ctatattgag aaagaagatg 540
attgatggct accccaagag aaagatttaa ggaagcacag aaaactgtaa ttcctggaac 600
ctgctgcgta aaaccataaa ggagtgtgtt acccagtagt ttggagggca tttttaaatt 660
tattttcaaa attttaagtt aaaagtcagt cttaagcttg gatgttttgg aatgtggatg 720
tttggctgaa tttatatata gggngtactc atcaataccn cattctttgt gganttcaag 780
aacccgttaa gagtgtgctt aattccctga ngtac 815

<210> 531
<211> 857
<212> DNA
<213> Homo Sapiens

<400> 531
aaaatgtata agcatatcat tttattttca tttaagccaa ctatgctgta agctatttag 60
acaagatgat tcacatttta tacttaaata caaatttcag aacataaagt atattttctg 120
tttttcaaat ccatatttta tctgaaatac atttcctgca acaaaacatt attagaagag 180
ttaaattatt tatttaaaaa aaatttttta gagacagggt ctcattctgt tgcccaggtt 240
ggagtgcagt ggcatgatca tacctcactg taacatcaaa ttcctaggct caagtgatct 300
tcttgcctca gcctcttgaa cagctgggac tacaggcatg gactaccatg ctaggctttt 360
tgttttttaa atagagacaa ggtcttatta tcctgcctag gctggtcttg aatgcctagc 420
ctcaatatcc ttctgccttg gcctcccaaa atgttggtat tacaggcacg agctaccgta 480
tctggccaaa attatttttt aatggttgta gtggagcaaa ttttcctcat tatgtaccta 540
cagggaatta gcacactctt aacggttctt gaatcaacaa agaatgtggt attgatgagt 600
acacactata tataaattca gccaaacatc cacatccaaa catccaagct gtaagactga 660
cttttaactt aaaattttga aaataaattt aaaaagccct tcaaactact ggtaacacac 720
ttcnttatgg tttaccccac aggntncagg aattccagtt tctgggcttn ccttaaacct 780
ttccttgggg tagcccatca atcatctctt tctcaaaaaa aggcntttgc attaacccgg 840
gccatttggc ctggcca 857

<210> 532
<211> 736
<212> DNA
<213> Homo Sapiens

<400> 532
cctggatgct gtgctgattg aggatgagct ggaggaactc caccgctact gccaggaggt 60
gtttggaagg gtctcccggt tccaccggcg gctcacctcc tgcactccgg gcttggaaga 120
tgaaaaggag gcctctgaga atgaaacaga catggaagac cccagagaaa tccagactga 180
ttcttggcgt aaacggggag agagcgagga accgtcatct cctcagtccc tgtgtcatct 240
agtggcccca gggcacgagc ggtctggctg cgagacccct gtcagcgtgg actccatccc 300
cctggagtgg gaccacacag gcgacgtggg gggctcctcc tctcacgaag aggacgagga 360
gggcccatac tacagcgcac tgtcagatgt agaaatccct gaaaatcctg aggcatatct 420
taaaatgacc acaaaaactt tgaaagcgtc ttctggtaaa tccatttcgg atggccactc 480
gtggcatgtt cccgacagcc cttcctgtcc cgagcatcac tacaagcaaa tggaaggtga 540
caggaatgtt ccacctgttc cccctgcgtc cagcaccccc tataaaccac cctatggaaa 600
gctactatta cctccaggca cggatggtgg caaagaaagc ccgcgagtcc tgaatggcaa 660
cccacagcag gaagacnggg gactggcccg gtattacaga gcaacagtca gggtgccttc 720
gacagatggg agatga 736

<210> 533
<211> 678
<212> DNA
<213> Homo Sapiens

<400> 533
ctggctaatt ttgtttttta atganaaaca tntgagttgt ncatatcaca aacagnttca 60
agtttntgnn ccaaccccce gcccccaccc ccgccgnggc caaacagtta aaacccaaag 120
caaagcatca ntttggatgt gaaaaagtnt taaaaaatta acttacaaaa ncatccctat 180
caagtcggta gttnggcatt tactttacat tagtcaaaag ctccagctaa aatctaattt 240
ttttaaaaaa aaatcgaagt ttacattatt catacanatt gggcattgtt aaaaaatatg 300
cncaaataac cacatccatg caatacaatt tntttaaaaa tttaaagcan tntaaaagag 360
cagagctagg tnctgaacan aacattttgg ngtataaccg gcagntcaaa attgccagct 420

gattggagta aaactgattn taagcgtatt aaatatgatn gatngtttcc atcagctaag 480
ggngcctatg agtttctgaa ccatttntag ggnggaatgt cctcgcttgc ttcnataata 540
tatgtgatgg acaccactgc tcattgncca tacctacatt ataataatgc tgttttacaa 600
acaaaccaga attcacaaag ngcttggctn ttcaggaaac tgacatttcc agagatccct 660
aaactaaatc aactagtt 678

<210> 534
<211> 789
<212> DNA
<213> Homo Sapiens

<400> 534
ggtggatgag ggtgctgggg acagtgctgc ggtggccagt ggtggtgccc agaccttggc 60
ccttgccggg tcccctgccc catcggggca ccccaaggct ggacacagtg agaacggggt 120
tgaggaggac acagaaggtc gaacggggcc caaagaaggt acccctggga gcccatcgga 180
gaccccaggc cccagcccag caggacctgc aggggacgag ccagccgaga gcccatcgga 240
gaccccaggc ccccgcccag caggacctgc aggggacgag ccagccgaga gcccatcgga 300
gaccccaggc ccccgcccgg caggacctgc aggggacgag ccagccgaga gcccatcgga 360
gaccccaggc cccagcccgg caggacctac aagggatgag ccagccgaga gcccatcgga 420
gaccccaggc ccccgcccgg caggacctgc aggggacgag ccagccgaga gcccatcgga 480
gaccccaggc ccccgcccgg caggacctgc aggggacgag ccagccgaga gcccatcgga 540
gaccccaggc cccagcccgg caggacctac aagggatgag ccagccaagg cgggggaggc 600
agcagagttg caggacgcag aggtggagtc ttctgccaag ttctgggaag ccnttaagga 660
aaggagttgc ccgtcggcgt cttggtcctc tggtccttgt tgaagggctt gggncttccg 720
gacttnttgn ggcttccctt aaggtttggt ttgtgaccct gaccatggan ccacaatgct 780
gggcttctt 789

<210> 535
<211> 802
<212> DNA
<213> Homo Sapiens

<400> 535
caaagtcaaa tgaatttatt cagaaaaggc cttgcttggt atcagactaa gaaaagcagc 60
cctgcccgcc gccccccact ccanaagggt caatttacaa agacaggggc gcaggggana 120
gctgggtggg gaagacacag ccaggccagg aggcttctgc aggccttggg cttccctgag 180
ggcctcgcgg cttctggtgg ctgctatagt ggccccacag gaggccagca ctgtgggtca 240
tgggtcacgg gtcacgaagc anagcctgag gggagcccgc agcagctccg gaggccccag 300
cccctgcagc agggacagga ggaccaagac gccgacgggc actcctttcc ttaaggcttc 360
ccanacttgg cagaagactc cacctctgcg tcctgcaact ctgctgcctc ccccgccttg 420
gctggctcat cccttgtagg tcctgccggg ctggggcctg gggtctccga tgggctctcg 480
gctggctcgt cccctgcagg tcctgccggg cgggggcctg gggtntccga tgggctctcg 540
gctggctcgt cccctgcagg tcctgccggg cgggggcctg gggtctccga tgggctctcg 600
gctggctcaa tcccttgtag gtccttgccg ggctggggcc tgggggtctt ccgaatgggc 660
ttctcggctg gcttcgtccc ttgcaagtcc ttgccgggcc gggggccctg ggggtcttcn 720
aatgggcttt ttgggttggg ttcggccccc tggaaggtcc ctggctgggc cgggggccc 780
tgggggtctt ccnaaagggg ct 802

<210> 536
<211> 901
<212> DNA
<213> Homo Sapiens

<400> 536
aaaagaatgg aaaagaaaat acagagagaa cgagaaatgg aaaaggggga gtttgatgat 60

```
aaagaagcat ttgtgacatc tgcatataag aaaaaactgc aagagagagc tgaagaagaa     120
gaaagagaaa agagggctgc tgcactggaa gcatgtttgg atgtaaccaa gcagaaagat     180
ctcagtggat tttataggca cctattaaat caagcagttg gtgaagagga agtacctaaa     240
tgcagctttc gtgaagccag atctggtata aaggaagaaa aatcaagggg cttctccaat     300
gaagtaagtt caaaaaacag aataccacaa gagaaatgca ttcttcaaac tgatgtgaaa     360
gtagaggaaa acccagatgc agacagtgac ttcgatgcta agagcagtgc ggatgatgaa     420
atagaagaaa ctagagtgaa ctgcagaagg gaaaaggtca tagagacccc tgagaatgac     480
ttcaagcacc acaggagtca aaaccactct cggtcaccta gtgaagaaag agggcacagt     540
accaggcacc acacgaaagg atcacgaacg tcgagaggac atgagaaaag ggaagatcag     600
caccaacaga agcaatccag agaccaaaga gaaccattac actgacccgt gantaccgga     660
aagaaaggga ttctcatagc acagagaggc cagtcattag agattcccat tggaagagcc     720
ttgaacagga agataaaccc anggccaagg gnccaaggag gaaagaagtg acngaagtnt     780
ggnaaaaggg agaaaggatt gggagaaata nttcccaagg aggaccagga aggagattgc     840
ccaccaaatn gatccgaaac cgacccaatg agaaaggaga gaaggaagag aaaagccaag     900
c                                                                     901
```

<210> 537
<211> 761
<212> DNA
<213> Homo Sapiens

<400> 537

```
atgtataagc atatcatttt attttcattt aagccaacta tgctgtaagc tatttagaca      60
agatgattca cattttatac ttaaatacaa atttcagaac ataaagtata ttttctgttt     120
ttcaaatcca tattttatct gaaatacatt tcctgcaaca aaacattatt agaagagtta     180
aattatttat ttaaaaaaaa ttttttagag acagggtctc attctgttgc ccaggttgga     240
gtgcagtggc atgatcatac ctcactgtaa catcaaattc ctaggctcaa gtgatcttct     300
tgcctcagcc tnttgaacag ctgggactac aggcatggac taccatgcta ggctttttgt     360
tttttaaata gagacaaggt cttattatcc tgcctaggct ggtcttgaat gcctagcctc     420
aatatccttc tgccttggcc tcccaaaatg ttggtattac aggcacgagc taccggatct     480
ggccaaaatt atttttaat ggttgtagtg gagcaaattt tcctcattat gtacctacag     540
ggaattaagc cactcttaac ggttcttgaa tcnncaaaga atgtggnatt gatgagttcn     600
cactatatat aaattcagcc caaacatcca cattcnaaca tnccagctgt aagactgact     660
tttaacttaa aattttgaaa natnaaattt aaaaatgccc tncaaaacta ctgggaacac     720
cctcccttta tgggtttanc ccagcagggt tccaaggaat t                         761
```

<210> 538
<211> 869
<212> DNA
<213> Homo Sapiens

<400> 538

```
cgggaacaag atggcagccc ccatacctca agggttctct tgtttatcga ggtttttggg      60
ctggtggttt cggcagccag ttctggtgac tcagtccgca gctatagttc cagtaagaac     120
taaaaaacgt ttcacacctc ctatttatca acctaaattt aaaacagaaa aggagtttat     180
gcaacatgcc cggaaagcag gattggttat tcctccagaa aaatcggacc gttccataca     240
tctggcctgt acagctggta tatttgatgc ctatgttcct cctgagggtg atgcacgcat     300
atcatctctt tcaaaggagg gactgataga gagaactgaa cgaatgaaga agactatggc     360
atcacaagtg tcaatccgga ggataaaaga ctatgatgcc aactttaaaa taaaggactt     420
ccctgaaaaa gctaaggata tctttattga agctcacctt tgtctaaata actcagacca     480
tgaccgactt cataccttgg taactgaaca ctgttttcca gacatgactt gggacatcaa     540
atataagacc gtccgctgga gctttgtgga atctttagag ccctctcatg ttgttcaagt     600
tcgctgttca agtatgatga accagggcaa cgtgtaccgn ccagatcacc gtaccgcatg     660
cacacccggc agactctggc catctatgac cgggtttggc ccggttgatg tatgggccag     720
gnagatgtcc ccaggatgtc ctggaagtat gttggantcg aaaagcagnt tgccaaancc     780
```

ctatggaagc tggagaagcn tacccaagac ggtnccccct gggcaccccc ttaagcaggc 840
catcctttaa aacggggatg atcccttgg 869

<210> 539
<211> 760
<212> DNA
<213> Homo Sapiens

<400> 539
aagggataaa ttatttcttt ggatttatat ttttccataa aatgcaaatg ctgattcatc 60
agtgagtcag tatatgaaaa agggcctctt aaatgtctta taaacactaa ttattcttcc 120
ccagtcttca tttccttaaa gtcacatcgc tcacaagtag gctcatcttc cacttctgcc 180
atctgaaggc tggtccatgc ccagcctgaa ccaggggaaa tgtgcagaac tcaccaaaat 240
ttttccaaca ccctgacaac atttcatttc aaactctgat ccctgccctg tgattacaaa 300
gaggatgctg ctggttgtct ctcacagtcc ctgctgtggg aaaaactgat atccaatgtt 360
ctctgaaaca tactgtcttt catctagact cagaagctag acataaaatt taaaaaagaa 420
gagtgtccat ggccatgtta tacctgccac ctgctagggc ccagtcatca gtcatggttg 480
ctgatgatga gactgctgaa aagacctgag caggatggga gagaacaaag gtagttcttt 540
ttatagcatg aggggaatgg gagacttcaa agcttncagg cagcctcatc accccaggct 600
tcaccctaga aagtcatttt tgncatcagg gctaacctga ngcttctggg gcctctcctt 660
gggcctcttc ataatcttct tctgggnttc agcttgaagg gccaggggat tcatnacccg 720
gctttaaagg gatggggcct gcttaagggg ggtgccccat 760

<210> 540
<211> 874
<212> DNA
<213> Homo Sapiens

<400> 540
ggagcactgc ctcaaacatg ggctgaaagt taagaagagt tttattggcc aaaataaatc 60
attctttggt cctttggagc tggtggagaa actttgtcca gaagcatcag atatagcgac 120
tagtgtcaga aatcttccag aattaaagac agctgtggga agaggccgag cgtggcttta 180
tcttgcactc atgcaaaaga aactggcaga ttatctgaaa gtgcttatag acaataaaca 240
tctcttaagc gagttctatg agcctgaggc tttaatgatg gaggaagaag ggatggtgat 300
tgttggtctg ctggtgggac tcaatgttct cgatgccaat ctctgcttga aaggagaaga 360
cttggattct caggttggag taatagattt ttccctctac cttaaggatg tgcaggatct 420
tgatggtggc aaggagcatg aaagaattac tgatgtcctt gatcaaaaaa attatgtgga 480
agaacttaac cggcacttga gctgcacagt tggggatctt caaaccaaga tagatggctt 540
ggaaaagact aactcaaagc ttcaagaaga gctttcagct gcaacagacc gaatttgctc 600
acttcaagaa gaacagcagc agttaaagag aacnaaatga attaattcga gaaagaagtn 660
aaaagagtgt agaagatacn aaacaggatc caaagttgag ctggagactt acagccaact 720
tcgcaaggtc tggatgaaat gtcnntgatg tgtggaagca cttaaagagg agaagaaagt 780
ccggttggaa ctggaaaaaa gaactggagn tccaaatggg aatgaaaacc caaatnggaa 840
atgccatgaa gttcctggna aaggcccccc ccaa 874

<210> 541
<211> 729
<212> DNA
<213> Homo Sapiens

<400> 541
gaaaaataaa tgattttatt gcagggccaa tgataggtag tcacaagggc atgaaatggc 60
agatctcttg tctgaagcag agaaggcaca ctggcagact ccatgtgtgt caaacgctgt 120
gcatgaatca ggtttttaga aggaaggtag gagaggaaaa ctactcacta gcagaactga 180
actgctgtaa aataggttaa attctttgaa aagtgaaaaa tgatagtagc aaaatcatga 240

agttgtatct gaaccagagc cgtgatgtaa ccaagtaaga tggaagtttc catccagagg 300
agttaattcc gaacaagtca cagaaaggtg agagctgccg gttccggcac gctgtcttct 360
ggagtgccag tgaccgggca agaaatttga ttctttcctt tgattctctt gggaaagaac 420
acatttccca agcccctgga gacccacagg gtttggcact gtccgtgagg ctgtgctcct 480
gaggacggac gttcaggagg ccgtggagga gcagcgctgc aggagcaggg tgtggcagct 540
gtcgcacact cgcaccggct tggggtagga gggcagggcc cagctcgttg ctgggagcag 600
gtgtttgcan aagatgtggc ccacagttcc ggcagtnggt gctttctccg gggaaaatgg 660
agaacttcct ttntcacacn tggctaccag tggggtcgnt ttcggcatct tttcaagcca 720
ggccgtggg 729

<210> 542
<211> 830
<212> DNA
<213> Homo Sapiens

<400> 542
gggacagcgg ggacggcacg gcgcgcgcag cttctaagtg ccagatgatg gaggagcgtg 60
ccaacctgat gcacatgatg aaactcagca tcaaggtgtt gctccagtcg gctctgagcc 120
tgggccgcag cctggatgcg gaccatgccc ccttgcagca gttctttgta gtgatggagc 180
actgcctcaa acatgggctg aaagttaaga agagttttat tggccaaaat aaatcattct 240
ttggtccttt ggagctggtg gagaaacttt gtccagaagc atcagatata gcgactagtg 300
tcagaaatct tccagaatta aagacagctg tgggaagagg ccgagcgtgg ctttatcttg 360
cactcatgca aaagaaactg gcagattatc tgaaagtgct tatagacaat aaacatctct 420
taagcgagtt ctatgagcct gaggctttaa tgatggagga agaagggatg gtgattgttg 480
gtctgctggt gggactcaat gttctcgatg ccaatctctg cttgaaagga gaagacttgg 540
attctcaggt tggagtaata gatttttccc tctaccttaa ggatgtgcag gatcttgatg 600
gtggcaagga gcatgaaaga attactgatg tccttgatca aaaaaattat gtggaagaac 660
ttaacccggc acttgagctg caccagttgg ggatctttca acccaagata gatggctttg 720
gaaaagacta actcaaagct tcagaagagc nttnagctgc accagaccga attttgctcc 780
tttcaagaaa nacagcaccn gttaagaaaa ccaaatggaa ttaatttcag 830

<210> 543
<211> 733
<212> DNA
<213> Homo Sapiens

<400> 543
gaaaaataaa tgattttatt gcagggccaa tgataggtag tcacaagggc atgaaatggc 60
agatctcttg tctgaagcag agaaggcaca ctggcagact ccatgtgtgt caaacgctgt 120
gcatgaatca ggtttttaga aggaaggtag gagaggaaaa ctactcacta gcagaactga 180
actgctgtaa aataggttaa attctttgaa aagtgaaaaa tgatagtagc aaaatcatga 240
agttgtatct gaaccagagc cgtgatgtaa ccaagtaaga tggaagtttc catccagagg 300
agttaattcc gaacaagtca cagaaaggtg anagctgccg gttccggcac gctgtcttct 360
ggagtgccag tgaccgggca agaaatttga ttctttcctt tgattctctt gggaaagaac 420
acatttccca agcccctgga gacccacagg gtttggcact gtccgtgagg ctgtgctcct 480
gaggacggac gttcaggagg cccgtggagg agcagcgctg caggagcagg gtgtggcagc 540
tgtcgcacac tcgcaccggc ttggggtagg anggcagggc tagctcgttg ctggancang 600
tgttgcaaaa naatgtggcc acagntncgg cagtgggtgc tttntccggg aaaagggaga 660
acttccttnt cacacttggc tacagnggng gncgctttcg ncatcttttt ancccaggcg 720
nnggcccttt caa 733

<210> 544
<211> 852
<212> DNA
<213> Homo Sapiens

<400> 544

gtggagaaat gcgctatcag ctgaataaaa ccaacatgga gaaggatgag gcagaaaagg 60
agcacagaga gttcagagca aaaactaaca gggatcttga aattaaagat caggaaatag 120
agaaattgag aatagaactg gatgaaagca aacaacactt ggaacaggag cagcagaagg 180
cagccctggc cagagaggag tgcctgagac taacagaact gctgggcgaa tctgagcacc 240
aactgcacct caccagatct gaaatagctc aactcagtca agaaaaaagg tatacatatg 300
ataaattggg aaagttacag agaagaaatg aagaattgga ggaacagtgt gtccagcatg 360
ggagagtaca tgagacgatg aagcaaaggc taaggcagct ggataagcac agccaggcca 420
cagcccagca gctggtgcag ctcctcagca agcagaacca gcttctcctg gagaggcaga 480
gcctgtcgga agaggtggac cggctgcgga cccagttacc cagcatgcca caatctgatt 540
gctgacctgg atggaacaga gtgaaataaa tgaattacaa agagatattt acattcatct 600
ggtttagact taatatgcca caacgcacca cgaccttccc agggtgacac cgcctcagcc 660
tgcagtgggg ctggtcctca tcaacgcggg cgctgtcccc gcacgcagtc gggctggagc 720
tggagtctga ctctagctga gcagactcct ggtgtatgtt ttcagaaatg gcttgaagtt 780
atgtgtttaa atctgctcat tcgtatgcta ggttatacat atgattttca ataaatgaac 840
tttttaaaga aa 852

<210> 545
<211> 414
<212> PRT
<213> Homo Sapiens

<400> 545

Leu Leu Asp Ala Ser Glu Lys Leu Lys Leu Thr Tyr Glu Glu Lys Cys
1 5 10 15
Glu Ile Glu Glu Ser Gln Leu Lys Phe Leu Arg Asn Asp Leu Ala Glu
20 25 30
Tyr Gln Arg Thr Cys Glu Asp Leu Lys Glu Gln Leu Lys His Lys Glu
35 40 45
Phe Leu Leu Ala Ala Asn Thr Cys Asn Arg Val Gly Gly Leu Cys Leu
50 55 60
Lys Cys Ala Gln His Glu Ala Val Leu Ser Gln Thr His Thr Asn Val
65 70 75 80
His Met Gln Thr Ile Glu Arg Leu Val Lys Glu Arg Asp Asp Leu Met
85 90 95
Ser Ala Leu Val Ser Val Arg Ser Ser Leu Ala Asp Thr Gln Gln Arg
100 105 110
Glu Ala Ser Ala Tyr Glu Gln Val Lys Gln Val Leu Gln Ile Ser Glu
115 120 125
Glu Ala Asn Phe Glu Lys Thr Lys Ala Leu Ile Gln Cys Asp Gln Leu
130 135 140
Arg Lys Glu Leu Glu Arg Gln Ala Glu Arg Leu Glu Lys Glu Leu Ala
145 150 155 160
Ser Gln Gln Glu Lys Arg Ala Ile Glu Lys Asp Met Met Lys Lys Glu
165 170 175
Ile Thr Lys Glu Arg Glu Tyr Met Gly Ser Lys Met Leu Ile Leu Ser
180 185 190
Gln Asn Ile Ala Gln Leu Glu Ala Gln Val Glu Lys Val Thr Lys Glu
195 200 205
Lys Ile Ser Ala Ile Asn Gln Leu Glu Glu Ile Gln Ser Gln Leu Ala
210 215 220
Ser Arg Glu Met Asp Val Thr Lys Val Cys Gly Glu Met Arg Tyr Gln
225 230 235 240
Leu Asn Lys Thr Asn Met Glu Lys Asp Glu Ala Glu Lys Glu His Arg
245 250 255

```
Glu Phe Arg Ala Lys Thr Asn Arg Asp Leu Glu Ile Lys Asp Gln Glu
            260                 265                 270
Ile Glu Lys Leu Arg Ile Glu Leu Asp Glu Ser Lys Gln His Leu Glu
        275                 280                 285
Gln Glu Gln Gln Lys Ala Ala Leu Ala Arg Glu Glu Cys Leu Arg Leu
    290                 295                 300
Thr Glu Leu Leu Gly Glu Ser Glu His Gln Leu His Leu Thr Arg Ser
305                 310                 315                 320
Glu Ile Ala Gln Leu Ser Gln Glu Lys Arg Tyr Thr Tyr Asp Lys Leu
                325                 330                 335
Gly Lys Leu Gln Arg Arg Asn Glu Glu Leu Glu Glu Gln Cys Val Gln
            340                 345                 350
His Gly Arg Val His Glu Thr Met Lys Gln Arg Leu Arg Gln Leu Asp
        355                 360                 365
Lys His Ser Gln Ala Thr Ala Gln Gln Leu Val Gln Leu Leu Ser Lys
    370                 375                 380
Gln Asn Gln Leu Leu Leu Glu Arg Gln Ser Leu Ser Glu Glu Val Asp
385                 390                 395                 400
Arg Leu Arg Thr Gln Leu Pro Ser Met Pro Gln Ser Asp Cys
                405                 410
```

<210> 546
<211> 2885
<212> DNA
<213> Homo Sapiens

<400> 546

```
ggaattcctc ttgtcgaagt caaaggagcc cacaccaggc ggcctcaacc attccctccc      60
acagcacccc aaatgctggg gagcccacca tgcttctttg gaccagagtt ccccctcccca     120
gagcggcccc cctgggacgc ctccctccta caaactgcct ttgcctgggc cctacgacag     180
tcgagacgac ttccccctcc gcaaaaacagc ctctgaaccc aacttgaaag tgcgttcaag     240
gctaaaacag aaggtggctg agcggagaag cagtcccctc ctgcgtcgca aggatgggac     300
tgttattagc acctttaaga agagagctgt tgagatcaca ggtgccgggc ctggggcgtc     360
gtccgtgtgt aacagcgcac ccggctccgg ccccagctct cccaacagct cccacagcac     420
catcgctgag aatggcttta ctggctcagt ccccaacatc cccactgaga tgctccctca     480
gcaccgagcc ctccctctgg acagctcccc caaccagttc agcctctaca cgtctccttc     540
tctgcccaac atctccctag ggctgcaggc cacggtcact gtcaccaact cacacctcac     600
tgcctccccg aagctgtcga cacagcagga ggccgagagg caggccctcc agtccctgcg     660
gcagggtggc acgctgaccg gcaagttcat gagcacatcc tctattcctg gctgcctgct     720
gggcgtggca ctggagggcg acgggagccc ccacgggcat gcctccctgc tgcagcatgt     780
gctgttgctg gagcaggccc ggcagcagag caccctcatt gctgtgccac tccacgggca     840
gtccccacta gtgacgggtg aacgtgtggc caccagcatg cggacggtag gcaagctccc     900
gcggcatcgg cccctgagcc gcactcagtc ctcaccgctg ccgcagagtc cccaggccct     960
gcagcagctg gtcatgcaac aacagcacca gcagttcctg gagaagcaga agcagcagca    1020
gctacagctg ggcaagatcc tcaccaagac aggggagctg cccaggcagc ccaccaccca    1080
ccctgaggag acagaggagg agctgacgga gcagcaggag gtcttgctgg gggagggagc    1140
cctgaccatg ccccgggagg gctccacaga gagtgagagc acacaggaag acctggagga    1200
ggaggacgag gaagaggatg gggaggagga ggaggattgc atccaggtta aggacgagga    1260
gggcgagagt ggtgctgagg aggggcccga cttggaggag cctggtgctg gatacaaaaa    1320
actgttctca gatgcccaac cgctgcaacc tttgcaggtg taccaagcgc ccctcagcct    1380
ggccactgtg ccccaccaag ccctgggccg tacccaatcc tcccctgctg cccctggggg    1440
catgaagaac cccccagacc aacccgtcaa gcacctcttc accacaagtg tggtctacga    1500
cacgttcatg ctaaagcacc agtgcatgtg cgggaacaca cacgtgcacc ctgagcatgc    1560
tggccggatc cagagcatct ggtcccggct gcaggagaca ggcctgctta gcaagtgcga    1620
gcggatccga ggtcgcaaag ccacgctaga tgagatccag acagtgcact ctgaatacca    1680
```

```
caccctgctc tatgggacca gtcccctcaa ccggcagaag ctagacagca agaagttgct    1740
cggtcccatc agccagaaga tgtatgctgt gctgccttgt gggggcatcg gggtggacag    1800
tgacaccgtg tggaatgaga tgcactcctc cagtgctgtg cgcatggcag tgggctgcct    1860
gctggagctg gccttcaagg tggctgcagg agagctcaag aatggatttg ccatcatccg    1920
gcccccagga caccacgccg aggaatccac agccatggga ttctgcttct tcaactctgt    1980
agccatcacc gcaaaactcc tacagcagaa gttgaacgtg ggcaaggtcc tcatcgtgga    2040
ctgggacatt caccatggca atggcaccca gcaggcgttc tacaatgacc cctctgtgct    2100
ctacatctct ctgcatcgct atgacaacgg gaacttcttt ccaggctctg gggctcctga    2160
agaggttggt ggaggaccag gcgtggggta caatgtgaac gtggcatgga caggaggtgt    2220
ggaccccccc attggagacg tggagtacct tacagccttc aggacagtgg tgatgcccat    2280
tgcccacgag ttctcacctg atgtggtcct agtctccgcc gggtttgatg ctgttgaagg    2340
acatctgtct cctctgggtg gctactctgt caccgccaga tgttttggcc acttgaccag    2400
gcagctgatg accctggcag ggggccgggt ggtgctggcc ctggagggag gccatgactt    2460
gaccgccatc tgtgatgcct ctgaagcttg tgtctcggct ctgctcagtg taaagctgca    2520
gcccttggat gaggcagtct tgcagcaaaa gcccaacatc aacgcagtgg ccacgctaga    2580
gaaagtcatc gagatccaga gcaaacactg gagctgtgtg cagaagttcg ccgctggtct    2640
gggccggtcc ctgcgagggg cccaagcagg tgagaccgaa gaagccgaaa tgtgaacgcc    2700
atggccttgc tgttggtggg ggccgaacag gcccaagctg cggcagcccg ggaacacagc    2760
cccaggccgg cagaggagcc catggagcag gagcctgccc tgtgacgccc cggcccccat    2820
ccctttgggc ttcaccattg tgattttgtt tatttttct attaaaaaca aaaagttaaa    2880
aattt                                                               2885
```

<210> 547
<211> 897
<212> PRT
<213> Homo Sapiens

<400> 547

```
Glu Phe Leu Leu Ser Lys Ser Lys Glu Pro Thr Pro Gly Gly Leu Asn
 1               5                  10                  15
His Ser Leu Pro Gln His Pro Lys Cys Trp Gly Ala His His Ala Ser
            20                  25                  30
Leu Asp Gln Ser Ser Pro Pro Gln Ser Gly Pro Pro Gly Thr Pro Pro
        35                  40                  45
Ser Tyr Lys Leu Pro Leu Pro Gly Pro Tyr Asp Ser Arg Asp Asp Phe
    50                  55                  60
Pro Leu Arg Lys Thr Ala Ser Glu Pro Asn Leu Lys Val Arg Ser Arg
65                  70                  75                  80
Leu Lys Gln Lys Val Ala Glu Arg Arg Ser Ser Pro Leu Leu Arg Arg
                85                  90                  95
Lys Asp Gly Thr Val Ile Ser Thr Phe Lys Lys Arg Ala Val Glu Ile
            100                 105                 110
Thr Gly Ala Gly Pro Gly Ala Ser Ser Val Cys Asn Ser Ala Pro Gly
        115                 120                 125
Ser Gly Pro Ser Ser Pro Asn Ser Ser His Ser Thr Ile Ala Glu Asn
    130                 135                 140
Gly Phe Thr Gly Ser Val Pro Asn Ile Pro Thr Glu Met Leu Pro Gln
145                 150                 155                 160
His Arg Ala Leu Pro Leu Asp Ser Ser Pro Asn Gln Phe Ser Leu Tyr
                165                 170                 175
Thr Ser Pro Ser Leu Pro Asn Ile Ser Leu Gly Leu Gln Ala Thr Val
            180                 185                 190
Thr Val Thr Asn Ser His Leu Thr Ala Ser Pro Lys Leu Ser Thr Gln
        195                 200                 205
Gln Glu Ala Glu Arg Gln Ala Leu Gln Ser Leu Arg Gln Gly Gly Thr
```

```
    210                 215                 220
Leu Thr Gly Lys Phe Met Ser Thr Ser Ser Ile Pro Gly Cys Leu Leu
225                 230                 235                 240
Gly Val Ala Leu Glu Gly Asp Gly Ser Pro His Gly His Ala Ser Leu
                245                 250                 255
Leu Gln His Val Leu Leu Leu Glu Gln Ala Arg Gln Gln Ser Thr Leu
            260                 265                 270
Ile Ala Val Pro Leu His Gly Gln Ser Pro Leu Val Thr Gly Glu Arg
        275                 280                 285
Val Ala Thr Ser Met Arg Thr Val Gly Lys Leu Pro Arg His Arg Pro
    290                 295                 300
Leu Ser Arg Thr Gln Ser Ser Pro Leu Pro Gln Ser Pro Gln Ala Leu
305                 310                 315                 320
Gln Gln Leu Val Met Gln Gln Gln His Gln Gln Phe Leu Glu Lys Gln
                325                 330                 335
Lys Gln Gln Gln Leu Gln Leu Gly Lys Ile Leu Thr Lys Thr Gly Glu
            340                 345                 350
Leu Pro Arg Gln Pro Thr Thr His Pro Glu Glu Thr Glu Glu Glu Leu
        355                 360                 365
Thr Glu Gln Gln Glu Val Leu Leu Gly Glu Gly Ala Leu Thr Met Pro
    370                 375                 380
Arg Glu Gly Ser Thr Glu Ser Glu Ser Thr Gln Glu Asp Leu Glu Glu
385                 390                 395                 400
Glu Asp Glu Glu Glu Asp Gly Glu Glu Glu Glu Asp Cys Ile Gln Val
                405                 410                 415
Lys Asp Glu Glu Gly Glu Ser Gly Ala Glu Glu Gly Pro Asp Leu Glu
            420                 425                 430
Glu Pro Gly Ala Gly Tyr Lys Lys Leu Phe Ser Asp Ala Gln Pro Leu
        435                 440                 445
Gln Pro Leu Gln Val Tyr Gln Ala Pro Leu Ser Leu Ala Thr Val Pro
    450                 455                 460
His Gln Ala Leu Gly Arg Thr Gln Ser Ser Pro Ala Ala Pro Gly Gly
465                 470                 475                 480
Met Lys Asn Pro Pro Asp Gln Pro Val Lys His Leu Phe Thr Thr Ser
                485                 490                 495
Val Val Tyr Asp Thr Phe Met Leu Lys His Gln Cys Met Cys Gly Asn
            500                 505                 510
Thr His Val His Pro Glu His Ala Gly Arg Ile Gln Ser Ile Trp Ser
        515                 520                 525
Arg Leu Gln Glu Thr Gly Leu Leu Ser Lys Cys Glu Arg Ile Arg Gly
    530                 535                 540
Arg Lys Ala Thr Leu Asp Glu Ile Gln Thr Val His Ser Glu Tyr His
545                 550                 555                 560
Thr Leu Leu Tyr Gly Thr Ser Pro Leu Asn Arg Gln Lys Leu Asp Ser
                565                 570                 575
Lys Lys Leu Leu Gly Pro Ile Ser Gln Lys Met Tyr Ala Val Leu Pro
            580                 585                 590
Cys Gly Gly Ile Gly Val Asp Ser Asp Thr Val Trp Asn Glu Met His
        595                 600                 605
Ser Ser Ser Ala Val Arg Met Ala Val Gly Cys Leu Leu Glu Leu Ala
    610                 615                 620
Phe Lys Val Ala Ala Gly Glu Leu Lys Asn Gly Phe Ala Ile Ile Arg
625                 630                 635                 640
Pro Pro Gly His His Ala Glu Glu Ser Thr Ala Met Gly Phe Cys Phe
                645                 650                 655
```

```
Phe Asn Ser Val Ala Ile Thr Ala Lys Leu Leu Gln Gln Lys Leu Asn
            660                 665                 670
Val Gly Lys Val Leu Ile Val Asp Trp Asp Ile His His Gly Asn Gly
        675                 680                 685
Thr Gln Gln Ala Phe Tyr Asn Asp Pro Ser Val Leu Tyr Ile Ser Leu
    690                 695                 700
His Arg Tyr Asp Asn Gly Asn Phe Phe Pro Gly Ser Gly Ala Pro Glu
705                 710                 715                 720
Glu Val Gly Gly Gly Pro Gly Val Gly Tyr Asn Val Asn Val Ala Trp
                725                 730                 735
Thr Gly Gly Val Asp Pro Pro Ile Gly Asp Val Glu Tyr Leu Thr Ala
            740                 745                 750
Phe Arg Thr Val Val Met Pro Ile Ala His Glu Phe Ser Pro Asp Val
        755                 760                 765
Val Leu Val Ser Ala Gly Phe Asp Ala Val Glu Gly His Leu Ser Pro
    770                 775                 780
Leu Gly Gly Tyr Ser Val Thr Ala Arg Cys Phe Gly His Leu Thr Arg
785                 790                 795                 800
Gln Leu Met Thr Leu Ala Gly Gly Arg Val Val Leu Ala Leu Glu Gly
                805                 810                 815
Gly His Asp Leu Thr Ala Ile Cys Asp Ala Ser Glu Ala Cys Val Ser
            820                 825                 830
Ala Leu Leu Ser Val Lys Leu Gln Pro Leu Asp Glu Ala Val Leu Gln
        835                 840                 845
Gln Lys Pro Asn Ile Asn Ala Val Ala Thr Leu Glu Lys Val Ile Glu
    850                 855                 860
Ile Gln Ser Lys His Trp Ser Cys Val Gln Lys Phe Ala Ala Gly Leu
865                 870                 875                 880
Gly Arg Ser Leu Arg Gly Ala Gln Ala Gly Glu Thr Glu Glu Ala Glu
                885                 890                 895
Met
```

<210> 548
<211> 1298
<212> DNA
<213> Homo Sapiens

<400> 548

```
ggctgctgaa atgactgcga accggcttgc agagagcctt ctggctttga gccancagga      60
agaactagcg gatttgccaa aagactacct cttgagtgag agtgaagatg agggggacaa     120
tgatggagag agaaagcatc naaagcttct ggaagcaatc agttcccttg atggaaagaa     180
taggcggaaa ttggctgana ggtctgaggc tagtctgaag gtgtcagagt tcaatgtcag     240
ttctgaagga tcaggagaaa agctggtcct tgcagatctg cttgagcctg ttaaaacttc     300
atcttctttg gccactgtga aaaagcaact gagtagagtc anatcaaaga anacagtgga     360
gttacctctg aacaaagaag agattgaacg gatccacaga gaatagcatt caataaaacg     420
cacaagtcct ctccaaatgg gaccctgtcg tcctgaagaa ccggcaggca gagcagctgg     480
ttttttcccc ggagaaagag gagccagcca ttgctcccat tgaacatgtg ctcagtggct     540
ggaaggcaag aactcccctg gagcaggaaa ttttcaacct cctccataag aacaagcagc     600
cagtgacaga ccctttactg acccctgtgg aaaaggcctc tctccgagcc atgagcctag     660
aagaggcaaa gatgcgacga gcagagcttc agagggctcg ggctctgcag tcctactatg     720
angccaaggc tcgaagagag aagaaaatcn aaagttaaaa gtatcacaaa gtcgtgaaga     780
aaggaaaggc caagaaagcc ctaaaagagt ttgagcagct gcggaaggtt aatccagctg     840
ccgcactaga agaacgaaga aaagaggaaa gaaggaggag gagaaagaag aagaacaagg     900
agaagaagaa agaagaaggg agaaggagaa gaaaagaagg agaagaggaa aaggaagaag     960
```

```
gagaaagaaa aggagaagga aaaggaaaag aaggagaaga aagaagaact aagaagaagg    1020
agaggaagaa taagaaggaa agaagaaaga aaaaagtnaa agaagaagaa agaaggaaga    1080
aggaaagaag aggaagaact nagaagaaga aagaggagga aagaagaaag aagaataagg    1140
aacnagaaag aaggagaaga aagaataaga agaggaagaa gaaaaagaag aaaagaagaa    1200
ggaaagaagg agaaaaagga agaaaaaagg aagaagaaag tagaaagcgg aagaaagaaa    1260
agaaagtata agaaggaaga agaagaaaga aggaaaaa                            1298
```

<210> 549
<211> 236
<212> PRT
<213> Homo Sapiens

<400> 549

```
Ala Ala Glu Met Thr Ala Asn Arg Leu Ala Glu Ser Leu Leu Ala Leu
 1               5                  10                  15
Ser Gln Glu Glu Leu Ala Asp Leu Pro Lys Asp Tyr Leu Leu Ser Glu
            20                  25                  30
Ser Glu Asp Glu Gly Asp Asn Asp Gly Glu Arg Lys His Lys Leu Leu
        35                  40                  45
Glu Ala Ile Ser Ser Leu Asp Gly Lys Asn Arg Arg Lys Leu Ala Arg
    50                  55                  60
Ser Glu Ala Ser Leu Lys Val Ser Glu Phe Asn Val Ser Ser Glu Gly
65                  70                  75                  80
Ser Gly Glu Lys Leu Val Leu Ala Asp Leu Leu Glu Pro Val Lys Thr
                85                  90                  95
Ser Ser Ser Leu Ala Thr Val Lys Lys Gln Leu Ser Arg Val Ser Lys
            100                 105                 110
Thr Val Glu Leu Pro Leu Asn Lys Glu Glu Ile Glu Arg Ile His Arg
        115                 120                 125
Glu Ile Ala Phe Asn Lys Thr His Lys Ser Ser Pro Asn Gly Thr Leu
    130                 135                 140
Ser Ser Val Leu Lys Asn Arg Gln Ala Glu Gln Leu Val Phe Pro Leu
145                 150                 155                 160
Glu Lys Glu Glu Pro Ala Ile Ala Pro Ile Glu His Val Leu Ser Gly
                165                 170                 175
Trp Lys Ala Arg Thr Pro Leu Glu Gln Glu Ile Phe Asn Leu Leu His
            180                 185                 190
Lys Asn Lys Gln Pro Val Thr Asp Pro Leu Leu Thr Pro Val Glu Lys
        195                 200                 205
Ala Ser Leu Arg Ala Met Ser Leu Glu Glu Ala Lys Met Arg Arg Ala
    210                 215                 220
Glu Leu Gln Arg Ala Arg Ala Leu Gln Ser Tyr Tyr
225                 230                 235
```

<210> 550
<211> 2236
<212> DNA
<213> Homo Sapiens

<400> 550

```
cctggcccgg tcgcggtcgc ggctctttcc agctcctggc agccgggcac ccgaaggaac      60
gggtcgtgca acgacgcagc tggacctggc ccagccatgg accgaaaagt ggcccgagaa     120
ttccggcata aggtggattt tctgattgaa aatgatgcag agaaggacta tctctatgat     180
gtgctgcgaa tgtaccacca gaccatggac gtggccgtgc tcgtgggaga cctgaagctg     240
gtcatcaatg aacccagccg tctgcctctg tttgatgcca ttcggccgct gatcccactg     300
```

```
aagcaccagg tggaatatga tcagctgacc ccccggcgct ccaggaagct gaaggaggtg     360
cgtctggacc gtctgcaccc cgaaggcctc ggcctgagtg tgcgtggtgg cctggagttt     420
ggctgtgggc tcttcatctc ccacctcatc aaaggcggtc aggcagacag cgtcgggctc     480
caggtagggg acgagatcgt ccggatcaat ggatattcca tctcctcctg tacccatgag     540
gaggtcatca acctcattcg aaccaagaaa actgtgtcca tcaaagtgag acacatcggc     600
ctgatccccg tgaaaagctc tcctgatgag cccctcactt ggcagtatgt ggatcagttt     660
gtgtcggaat ctgggggcgt gcgaggcagc ctgggctccc ctggaaatcg ggaaaacaag     720
gagaagaagg tcttcatcag cctggtaggc tcccgaggcc ttggctgcag catttccagc     780
ggccccatcc agaagcctgg catctttatc agccatgtga aacctggctc cctgtctgct     840
gaggtgggat tggagatagg ggaccagatt gtcgaagtca atggcgtcga cttctctaac     900
ctggatcaca aggaggctgt aaatgtgctg aaaaatagcc gcagcctgac catctccatt     960
gtagctgcag ctggccggga gctgttcatg acagaccggg agcggctggc agaggcgcgg    1020
cagcgtgagc tgcagcggca ggagcttctc atgcagaagc ggctggcgat ggagtccaac    1080
aagatcctcc aggagcagca ggagatggag cggcaaagga gaaaagaaat tgcccagaag    1140
gcagcagagg aaaatgagag ataccggaag gagatggaac agattgtaga ggaggaagag    1200
aagtttaaga agcaatggga agaagactgg ggctcaaagg aacagctact cttgcctaaa    1260
accatcactg ctgaggtaca cccagtaccc cttcgcaagc caaagtatga tcagggagtg    1320
gaacctgagc tcgagcccgc agatgacctg gatggaggca cggaggagca gggagagcag    1380
gatttccgga aatatgagga aggctttgac ccctactcta tgttcacccc agagcagatc    1440
atggggaagg atgtccggct cctacgcatc aagaaggagg gatccttaga cctggccctg    1500
gaaggcggtg tggactcccc cattgggaag gtggtcgttt ctgctgtgta tgagcgggga    1560
gctgctgagc ggcatggtgg cattgtgaaa ggggacgaga tcatggcaat caacggcaag    1620
attgtgacag actacaccct ggctgaggct gacgctgccc tgcagaaggc ctggaatcag    1680
ggcggggact ggatcgacct tgtggttgcc gtctgccccc caaaggagta tgacgatgag    1740
ctgaccttct tgctgaagtc caaaagggga aaccaaattc acgcgttagg aaacagtgag    1800
ctccggcccc acctcgtgaa cacaaagcct cggaccagcc ttgagagagg ccacatgaca    1860
cacaccagat ggcatccttg ggacctgaat ctatcaccca ggaatctcaa actccctttg    1920
gccctgaacc agggccagat aaggaacagc tcgggccact tttttgaagg ccaatgtgga    1980
ggaaagggag cagccagccg tttgggagaa gatctcaagg atccagactc tcattccttt    2040
cctctggccc agtgaatttg gtctctccca gctttggggg actccttcct tgaaccctaa    2100
taagacccca ctggagtctc tctctctcca tccctctcct ctgccctctg ctctaattgc    2160
tgccaggatt gtcactccaa accttactct gagctcatta ataaaataaa cagatttatt    2220
ttccagctta aaaaaa                                                    2236
```

<210> 551
<211> 652
<212> PRT
<213> Homo Sapiens

<400> 551

```
Met Asp Arg Lys Val Ala Arg Glu Phe Arg His Lys Val Asp Phe Leu
 1               5                  10                  15
Ile Glu Asn Asp Ala Glu Lys Asp Tyr Leu Tyr Asp Val Leu Arg Met
            20                  25                  30
Tyr His Gln Thr Met Asp Val Ala Val Leu Val Gly Asp Leu Lys Leu
        35                  40                  45
Val Ile Asn Glu Pro Ser Arg Leu Pro Leu Phe Asp Ala Ile Arg Pro
    50                  55                  60
Leu Ile Pro Leu Lys His Gln Val Glu Tyr Asp Gln Leu Thr Pro Arg
65                  70                  75                  80
Arg Ser Arg Lys Leu Lys Glu Val Arg Leu Asp Arg Leu His Pro Glu
                85                  90                  95
Gly Leu Gly Leu Ser Val Arg Gly Gly Leu Glu Phe Gly Cys Gly Leu
            100                 105                 110
Phe Ile Ser His Leu Ile Lys Gly Gly Gln Ala Asp Ser Val Gly Leu
```

```
        115                 120                 125
Gln Val Gly Asp Glu Ile Val Arg Ile Asn Gly Tyr Ser Ile Ser Ser
    130                 135                 140
Cys Thr His Glu Glu Val Ile Asn Leu Ile Arg Thr Lys Lys Thr Val
145                 150                 155                 160
Ser Ile Lys Val Arg His Ile Gly Leu Ile Pro Val Lys Ser Ser Pro
                165                 170                 175
Asp Glu Pro Leu Thr Trp Gln Tyr Val Asp Gln Phe Val Ser Glu Ser
            180                 185                 190
Gly Gly Val Arg Gly Ser Leu Gly Ser Pro Gly Asn Arg Glu Asn Lys
        195                 200                 205
Glu Lys Lys Val Phe Ile Ser Leu Val Gly Ser Arg Gly Leu Gly Cys
    210                 215                 220
Ser Ile Ser Ser Gly Pro Ile Gln Lys Pro Gly Ile Phe Ile Ser His
225                 230                 235                 240
Val Lys Pro Gly Ser Leu Ser Ala Glu Val Gly Leu Glu Ile Gly Asp
                245                 250                 255
Gln Ile Val Glu Val Asn Gly Val Asp Phe Ser Asn Leu Asp His Lys
            260                 265                 270
Glu Ala Val Asn Val Leu Lys Asn Ser Arg Ser Leu Thr Ile Ser Ile
        275                 280                 285
Val Ala Ala Ala Gly Arg Glu Leu Phe Met Thr Asp Arg Glu Arg Leu
    290                 295                 300
Ala Glu Ala Arg Gln Arg Glu Leu Gln Arg Gln Glu Leu Leu Met Gln
305                 310                 315                 320
Lys Arg Leu Ala Met Glu Ser Asn Lys Ile Leu Gln Glu Gln Gln Glu
                325                 330                 335
Met Glu Arg Gln Arg Arg Lys Glu Ile Ala Gln Lys Ala Ala Glu Glu
            340                 345                 350
Asn Glu Arg Tyr Arg Lys Glu Met Glu Gln Ile Val Glu Glu Glu Glu
        355                 360                 365
Lys Phe Lys Lys Gln Trp Glu Glu Asp Trp Gly Ser Lys Glu Gln Leu
    370                 375                 380
Leu Leu Pro Lys Thr Ile Thr Ala Glu Val His Pro Val Pro Leu Arg
385                 390                 395                 400
Lys Pro Lys Tyr Asp Gln Gly Val Glu Pro Glu Leu Glu Pro Ala Asp
                405                 410                 415
Asp Leu Asp Gly Gly Thr Glu Glu Gln Gly Glu Gln Asp Phe Arg Lys
            420                 425                 430
Tyr Glu Glu Gly Phe Asp Pro Tyr Ser Met Phe Thr Pro Glu Gln Ile
        435                 440                 445
Met Gly Lys Asp Val Arg Leu Leu Arg Ile Lys Lys Glu Gly Ser Leu
    450                 455                 460
Asp Leu Ala Leu Glu Gly Gly Val Asp Ser Pro Ile Gly Lys Val Val
465                 470                 475                 480
Val Ser Ala Val Tyr Glu Arg Gly Ala Ala Glu Arg His Gly Gly Ile
                485                 490                 495
Val Lys Gly Asp Glu Ile Met Ala Ile Asn Gly Lys Ile Val Thr Asp
            500                 505                 510
Tyr Thr Leu Ala Glu Ala Asp Ala Ala Leu Gln Lys Ala Trp Asn Gln
        515                 520                 525
Gly Gly Asp Trp Ile Asp Leu Val Val Ala Val Cys Pro Pro Lys Glu
    530                 535                 540
Tyr Asp Asp Glu Leu Thr Phe Leu Leu Lys Ser Lys Arg Gly Asn Gln
545                 550                 555                 560
```

```
Ile His Ala Leu Gly Asn Ser Glu Leu Arg Pro His Leu Val Asn Thr
                565                 570                 575
Lys Pro Arg Thr Ser Leu Glu Arg Gly His Met Thr His Thr Arg Trp
            580                 585                 590
His Pro Trp Asp Leu Asn Leu Ser Pro Arg Asn Leu Lys Leu Pro Leu
        595                 600                 605
Ala Leu Asn Gln Gly Gln Ile Arg Asn Ser Ser Gly His Phe Phe Glu
    610                 615                 620
Gly Gln Cys Gly Gly Lys Gly Ala Ala Ser Arg Leu Gly Glu Asp Leu
625                 630                 635                 640
Lys Asp Pro Asp Ser His Ser Phe Pro Leu Ala Gln
                645                 650
```

<210> 552
<211> 2162
<212> DNA
<213> Homo Sapiens

<400> 552

```
cctggcccgg tcgcggtcgc ggctctttcc agctcctggc agccgggcac ccgaaggaac      60
gggtcgtgca acgacgcagc tggacctggc ccagccatgg accgaaaagt ggcccgagaa     120
ttccggcata aggtggattt tctgattgaa aatgatgcag agaaggacta tctctatgat     180
gtgctgcgaa tgtaccacca gaccatggac gtggccgtgc tcgtgggaga cctgaagctg     240
gtcatcaatg aacccagccg tctgcctctg tttgatgcca ttcggccgct gatcccactg     300
aagcaccagg tggaatatga tcagctgacc ccccggcgct ccaggaagct gaaggaggtg     360
cgtctggacc gtctgcaccc cgaaggcctc ggcctgagtg tgcgtggtgg cctggagttt     420
ggctgtgggc tcttcatctc ccacctcatc aaaggcggtc aggcagacag cgtcgggctc     480
caggtagggg acgagatcgt ccggatcaat ggatattcca tctcctcctg tacccatgag     540
gaggtcatca acctcattcg aaccaagaaa actgtgtcca tcaaagtgag acacatcggc     600
ctgatccccg tgaaaagctc tcctgatgag cccctcactt ggcagtatgt ggatcagttt     660
gtgtcggaat ctgggggcgt gcgaggcagc ctgggctccc ctggaaatcg ggaaaacaag     720
gagaagaagg tcttcatcag cctggtaggc tcccgaggcc ttggctgcag catttccagc     780
ggccccatcc agaagcctgg catctttatc agccatgtga aacctggctc cctgtctgct     840
gaggtgggat tggagatagg ggaccagatt gtcgaagtca atggcgtcga cttctctaac     900
ctggatcaca aggaggctgt aaatgtgctg aaaaatagcc gcagcctgac catctccatt     960
gtagctgcag ctggccggga gctgttcatg acagaccggg agcggctggc agaggcgcgg    1020
cagcgtgagc tgcagcggca ggagcttctc atgcagaagc ggctggcgat ggagtccaac    1080
aagatcctcc aggagcagca ggagatggag cggcaaagga gaaaagaaat tgcccagaag    1140
gcagcagagg aaaatgagag ataccggaag gagatggaac agattgtaga ggaggaagag    1200
aagtttaaga agcaatggga agaagactgg ggctcaaagg aacagctact cttgcctaaa    1260
accatcactg ctgaggtaca cccagtaccc cttcgcaagc caaagtgatt tccggaaata    1320
tgaggaaggc tttgaccect actctatgtt caccccagag cagatcatgg ggaaggatgt    1380
ccggctccta cgcatcaaga aggagggatc cttagacctg gccctggaag gcggtgtgga    1440
ctcccccatt gggaaggtgg tcgtttctgc tgtgtatgag cggggagctg ctgagcggca    1500
tggtggcatt gtgaaagggg acgagatcat ggcaatcaac ggcaagattg tgacagacta    1560
caccctggct gaggctgacg ctgccctgca gaaggcctgg aatcagggcg gggactggat    1620
cgaccttgtg gttgccgtct gccccccaaa ggagtatgac gatgagctga ccttcttgct    1680
gaagtccaaa aggggaaacc aaattcacgc gttaggaaac agtgagctcc ggccccacct    1740
cgtgaacaca aagcctcgga ccagccttga gagaggccac atgacacaca ccagatggca    1800
tccttgggac ctgaatctat cacccaggaa tctcaaactc cctttggccc tgaaccaggg    1860
ccagataagg aacagctcgg gccacttttt tgaaggccaa tgtggaggaa agggagcagc    1920
cagccgtttg ggagaagatc tcaaggatcc agactctcat tcctttcctc tggcccagtg    1980
aatttggtct ctcccagctt tgggggactc cttccttgaa ccctaataag accccactgg    2040
agtctctctc tctccatccc tctcctctgc cctctgctct aattgctgcc aggattgtca    2100
ctccaaacct tactctgagc tcattaataa aataaacaga tttattttcc agcttaaaaa    2160
```

aa 2162

<210> 553
<211> 403
<212> PRT
<213> Homo Sapiens

<400> 553

```
Met Asp Arg Lys Val Ala Arg Glu Phe Arg His Lys Val Asp Phe Leu
 1               5                  10                  15
Ile Glu Asn Asp Ala Glu Lys Asp Tyr Leu Tyr Asp Val Leu Arg Met
            20                  25                  30
Tyr His Gln Thr Met Asp Val Ala Val Leu Val Gly Asp Leu Lys Leu
        35                  40                  45
Val Ile Asn Glu Pro Ser Arg Leu Pro Leu Phe Asp Ala Ile Arg Pro
    50                  55                  60
Leu Ile Pro Leu Lys His Gln Val Glu Tyr Asp Gln Leu Thr Pro Arg
65                  70                  75                  80
Arg Ser Arg Lys Leu Lys Glu Val Arg Leu Asp Arg Leu His Pro Glu
                85                  90                  95
Gly Leu Gly Leu Ser Val Arg Gly Gly Leu Glu Phe Gly Cys Gly Leu
            100                 105                 110
Phe Ile Ser His Leu Ile Lys Gly Gly Gln Ala Asp Ser Val Gly Leu
        115                 120                 125
Gln Val Gly Asp Glu Ile Val Arg Ile Asn Gly Tyr Ser Ile Ser Ser
    130                 135                 140
Cys Thr His Glu Glu Val Ile Asn Leu Ile Arg Thr Lys Lys Thr Val
145                 150                 155                 160
Ser Ile Lys Val Arg His Ile Gly Leu Ile Pro Val Lys Ser Ser Pro
                165                 170                 175
Asp Glu Pro Leu Thr Trp Gln Tyr Val Asp Gln Phe Val Ser Glu Ser
            180                 185                 190
Gly Gly Val Arg Gly Ser Leu Gly Ser Pro Gly Asn Arg Glu Asn Lys
        195                 200                 205
Glu Lys Lys Val Phe Ile Ser Leu Val Gly Ser Arg Gly Leu Gly Cys
    210                 215                 220
Ser Ile Ser Ser Gly Pro Ile Gln Lys Pro Gly Ile Phe Ile Ser His
225                 230                 235                 240
Val Lys Pro Gly Ser Leu Ser Ala Glu Val Gly Leu Glu Ile Gly Asp
                245                 250                 255
Gln Ile Val Glu Val Asn Gly Val Asp Phe Ser Asn Leu Asp His Lys
            260                 265                 270
Glu Ala Val Asn Val Leu Lys Asn Ser Arg Ser Leu Thr Ile Ser Ile
        275                 280                 285
Val Ala Ala Ala Gly Arg Glu Leu Phe Met Thr Asp Arg Glu Arg Leu
    290                 295                 300
Ala Glu Ala Arg Gln Arg Glu Leu Gln Arg Gln Glu Leu Leu Met Gln
305                 310                 315                 320
Lys Arg Leu Ala Met Glu Ser Asn Lys Ile Leu Gln Glu Gln Gln Glu
                325                 330                 335
Met Glu Arg Gln Arg Arg Lys Glu Ile Ala Gln Lys Ala Ala Glu Glu
            340                 345                 350
Asn Glu Arg Tyr Arg Lys Glu Met Glu Gln Ile Val Glu Glu Glu Glu
        355                 360                 365
Lys Phe Lys Lys Gln Trp Glu Glu Asp Trp Gly Ser Lys Glu Gln Leu
```

```
   370                 375                 380
Leu Leu Pro Lys Thr Ile Thr Ala Glu Val His Pro Val Pro Leu Arg
385                 390                 395                 400
Lys Pro Lys
```

<210> 554
<211> 1789
<212> DNA
<213> Homo Sapiens

<400> 554

```
cttctggatg catccgagaa gctaaaactt acttatgagg aaaagtgtga aattgaggaa      60
tcccaattga agtttttgag gaacgactta gctgaatatc agagaacttg tgaagatctt     120
aaagagcaac taaagcataa agaatttctt ctggctgcta atacttgtaa ccgtgttggt     180
ggtctttgtt tgaaatgtgc tcagcatgaa gctgttcttt cccaaaccca tactaatgtt     240
catatgcaga ccatcgaaag actggttaaa gaaagagatg acttgatgtc tgcactagtt     300
tccgtaagga gcagcttggc agatacgcag caaagagaag caagtgctta tgaacaggtg     360
aaacaagttt tgcaaatatc tgaggaagcc aattttgaaa aaaccaaggc tttaatccag     420
tgtgaccagt tgaggaagga gctggagagg caggcggagc gacttgaaaa agaacttgca     480
tctcagcaag agaaaagggc cattgagaaa gacatgatga aaaaggaaat aacgaaagaa     540
agggagtaca tgggatcaaa gatgttgatc ttgtctcaga atattgccca actggaggcc     600
caggtggaaa aggttacaaa ggaaaagatt tcagctatta atcaactgga ggaaattcaa     660
agccagctgg cttctcggga aatggatgtc acaaaggtgt gtggagaaat gcgctatcag     720
ctgaataaaa ccaacatgga gaaggatgag gcagaaaagg agcacagaga gttcagagca     780
aaaactaaca gggatcttga aattaaagat caggaaatag agaaattgag aatagaactg     840
gatgaaagca aacaacactt ggaacaggag cagcagaagg cagccctggc cagagaggag     900
tgcctgagac taacagaact gctgggcgaa tctgagcacc aactgcacct caccagacag     960
gaaaaagata gcattcagca gagctttagc aaggaagcaa aggcccaagc ccttcaggcc    1020
cagcaaagag agcaggagct gacacagaag atacagcaaa tggaagccca gcatgacaaa    1080
actgaaaatg aacagtattt gttgctgacc tcccagaata catttttgac aaagttaaag    1140
gaagaatgct gtacattagc caagaaactg gaacaaatct ctcaaaaaac cagatctgaa    1200
atagctcaac tcagtcaaga aaaaaggtat acatatgata aattgggaaa gttacagaga    1260
agaaatgaag aattggagga acagtgtgtc cagcatggga gagtacatga gacgatgaag    1320
caaaggctaa ggcagctgga taagcacagc caggccacag cccagcagct ggtgcagctc    1380
ctcagcaagc agaaccagct tctcctggag aggcagagcc tgtcggaaga ggtggaccgg    1440
ctgcggaccc agttacccag catgccacaa tctgattgct gacctggatg gaacagagtg    1500
aaataaatga attacaaaga gatatttaca ttcatctggt ttagacttaa tatgccacaa    1560
cgcaccacga ccttcccagg gtgacaccgc ctcagcctgc agtggggctg gtcctcatca    1620
acgcgggcgc tgtccccgca cgcagtcggg ctggagctgg agtctgactc tagctgagca    1680
gactcctggt gtatgttttc agaaatggct tgaagttatg tgtttaaatc tgctcattcg    1740
tatgctaggt tatacatatg attttcaata aatgaacttt ttaaagaaa                1789
```

<210> 555
<211> 493
<212> PRT
<213> Homo Sapiens

<400> 555

```
Leu Leu Asp Ala Ser Glu Lys Leu Lys Leu Thr Tyr Glu Glu Lys Cys
 1               5                  10                  15
Glu Ile Glu Glu Ser Gln Leu Lys Phe Leu Arg Asn Asp Leu Ala Glu
            20                  25                  30
Tyr Gln Arg Thr Cys Glu Asp Leu Lys Glu Gln Leu Lys His Lys Glu
        35                  40                  45
```

```
Phe Leu Leu Ala Ala Asn Thr Cys Asn Arg Val Gly Gly Leu Cys Leu
    50                  55                  60
Lys Cys Ala Gln His Glu Ala Val Leu Ser Gln Thr His Thr Asn Val
65                  70                  75                  80
His Met Gln Thr Ile Glu Arg Leu Val Lys Glu Arg Asp Asp Leu Met
                85                  90                  95
Ser Ala Leu Val Ser Val Arg Ser Ser Leu Ala Asp Thr Gln Gln Arg
            100                 105                 110
Glu Ala Ser Ala Tyr Glu Gln Val Lys Gln Val Leu Gln Ile Ser Glu
        115                 120                 125
Glu Ala Asn Phe Glu Lys Thr Lys Ala Leu Ile Gln Cys Asp Gln Leu
    130                 135                 140
Arg Lys Glu Leu Glu Arg Gln Ala Glu Arg Leu Glu Lys Glu Leu Ala
145                 150                 155                 160
Ser Gln Gln Glu Lys Arg Ala Ile Glu Lys Asp Met Met Lys Lys Glu
                165                 170                 175
Ile Thr Lys Glu Arg Glu Tyr Met Gly Ser Lys Met Leu Ile Leu Ser
            180                 185                 190
Gln Asn Ile Ala Gln Leu Glu Ala Gln Val Glu Lys Val Thr Lys Glu
        195                 200                 205
Lys Ile Ser Ala Ile Asn Gln Leu Glu Glu Ile Gln Ser Gln Leu Ala
    210                 215                 220
Ser Arg Glu Met Asp Val Thr Lys Val Cys Gly Glu Met Arg Tyr Gln
225                 230                 235                 240
Leu Asn Lys Thr Asn Met Glu Lys Asp Glu Ala Glu Lys Glu His Arg
                245                 250                 255
Glu Phe Arg Ala Lys Thr Asn Arg Asp Leu Glu Ile Lys Asp Gln Glu
            260                 265                 270
Ile Glu Lys Leu Arg Ile Glu Leu Asp Glu Ser Lys Gln His Leu Glu
        275                 280                 285
Gln Glu Gln Gln Lys Ala Ala Leu Ala Arg Glu Glu Cys Leu Arg Leu
    290                 295                 300
Thr Glu Leu Leu Gly Glu Ser Glu His Gln Leu His Leu Thr Arg Gln
305                 310                 315                 320
Glu Lys Asp Ser Ile Gln Gln Ser Phe Ser Lys Glu Ala Lys Ala Gln
                325                 330                 335
Ala Leu Gln Ala Gln Gln Arg Glu Gln Glu Leu Thr Gln Lys Ile Gln
            340                 345                 350
Gln Met Glu Ala Gln His Asp Lys Thr Glu Asn Glu Gln Tyr Leu Leu
        355                 360                 365
Leu Thr Ser Gln Asn Thr Phe Leu Thr Lys Leu Lys Glu Glu Cys Cys
    370                 375                 380
Thr Leu Ala Lys Lys Leu Glu Gln Ile Ser Gln Lys Thr Arg Ser Glu
385                 390                 395                 400
Ile Ala Gln Leu Ser Gln Glu Lys Arg Tyr Thr Tyr Asp Lys Leu Gly
                405                 410                 415
Lys Leu Gln Arg Arg Asn Glu Glu Leu Glu Glu Gln Cys Val Gln His
            420                 425                 430
Gly Arg Val His Glu Thr Met Lys Gln Arg Leu Arg Gln Leu Asp Lys
        435                 440                 445
His Ser Gln Ala Thr Ala Gln Gln Leu Val Gln Leu Leu Ser Lys Gln
    450                 455                 460
Asn Gln Leu Leu Leu Glu Arg Gln Ser Leu Ser Glu Glu Val Asp Arg
465                 470                 475                 480
Leu Arg Thr Gln Leu Pro Ser Met Pro Gln Ser Asp Cys
```

485 490

<210> 556
<211> 1306
<212> DNA
<213> Homo Sapiens

<400> 556
aaaaatagcc gcagcctgac catctccatt gtagctgcag ctggccggga gctgttcatg 60
acagaccggg agcggctggc agaggcgcgg cagcgtgagc tgcagcggca ggagcttctc 120
atgcagaagc ggctggcgat ggagtccaac aagatcctcc aggagcagca ggagatggag 180
cggcaaagga gaaaagaaat tgcccagaag gcagcagagg aaaatgagag ataccggaag 240
gagatggaac agattgtaga ggaggaagag aagtttaaga agcaatggga agaagactgg 300
ggctcaaagg aacagctact cttgcctaaa accatcactg ctgaggtaca cccagtaccc 360
cttcgcaagc caaagtatga tcagggagtg gaacctgagc tcgagcccgc agatgacctg 420
gatggaggca cggaggagca gggagagcag gatttccgga aatatgagga aggctttgac 480
ccctactcta tgttcacccc agagcagatc atggggaagg atgtccggct cctacgcatc 540
aagaaggagg gatccttaga cctggccctg gaaggcggtg tggactcccc cattgggaag 600
gtggtcgttt ctgctgtgta tgagcgggga gctgctgagc ggcatggtgg cattgtgaaa 660
ggggacgaga tcatggcaat caacggcaag attgtgacag actacaccct ggctgaggct 720
gacgctgccc tgcagaaggc ctggaatcag ggcggggact ggatcgacct tgtggttgcc 780
gtctgccccc caaaggagta tgacgatgag ctgaccttct tgctgaagtc caaaagggga 840
aaccaaattc acgcgttagg aaacagtgag ctccggcccc acctcgtgaa cacaaagcct 900
cggaccagcc ttgagagagg ccacatgaca cacaccagat ggcatccttg ggacctgaat 960
ctatcaccca ggaatctcaa actccctttg gccctgaacc agggccagat aaggaacagc 1020
tcgggccact tttttgaagg ccaatgtgga ggaaagggag cagccagccg tttgggagaa 1080
gatctcaagg atccagactc tcattccttt cctctggccc agtgaatttg gtctctccca 1140
gctttggggg actccttcct tgaaccctaa taagacccca ctggagtctc tctctctcca 1200
tccctctcct ctgccctctg ctctaattgc tgccaggatt gtcactccaa accttactct 1260
gagctcatta ataaaataaa cagatttatt ttccagctta aaaaaa 1306

<210> 557
<211> 328
<212> PRT
<213> Homo Sapiens

<400> 557
Met Glu Ser Asn Lys Ile Leu Gln Glu Gln Gln Glu Met Glu Arg Gln
1 5 10 15
Arg Arg Lys Glu Ile Ala Gln Lys Ala Ala Glu Glu Asn Glu Arg Tyr
20 25 30
Arg Lys Glu Met Glu Gln Ile Val Glu Glu Glu Glu Lys Phe Lys Lys
35 40 45
Gln Trp Glu Glu Asp Trp Gly Ser Lys Glu Gln Leu Leu Leu Pro Lys
50 55 60
Thr Ile Thr Ala Glu Val His Pro Val Pro Leu Arg Lys Pro Lys Tyr
65 70 75 80
Asp Gln Gly Val Glu Pro Glu Leu Glu Pro Ala Asp Asp Leu Asp Gly
85 90 95
Gly Thr Glu Glu Gln Gly Glu Gln Asp Phe Arg Lys Tyr Glu Glu Gly
100 105 110
Phe Asp Pro Tyr Ser Met Phe Thr Pro Glu Gln Ile Met Gly Lys Asp
115 120 125
Val Arg Leu Leu Arg Ile Lys Lys Glu Gly Ser Leu Asp Leu Ala Leu
130 135 140

```
Glu Gly Gly Val Asp Ser Pro Ile Gly Lys Val Val Val Ser Ala Val
145                 150                 155                 160
Tyr Glu Arg Gly Ala Ala Glu Arg His Gly Gly Ile Val Lys Gly Asp
                165                 170                 175
Glu Ile Met Ala Ile Asn Gly Lys Ile Val Thr Asp Tyr Thr Leu Ala
            180                 185                 190
Glu Ala Asp Ala Ala Leu Gln Lys Ala Trp Asn Gln Gly Gly Asp Trp
        195                 200                 205
Ile Asp Leu Val Val Ala Val Cys Pro Pro Lys Glu Tyr Asp Asp Glu
    210                 215                 220
Leu Thr Phe Leu Leu Lys Ser Lys Arg Gly Asn Gln Ile His Ala Leu
225                 230                 235                 240
Gly Asn Ser Glu Leu Arg Pro His Leu Val Asn Thr Lys Pro Arg Thr
                245                 250                 255
Ser Leu Glu Arg Gly His Met Thr His Thr Arg Trp His Pro Trp Asp
            260                 265                 270
Leu Asn Leu Ser Pro Arg Asn Leu Lys Leu Pro Leu Ala Leu Asn Gln
        275                 280                 285
Gly Gln Ile Arg Asn Ser Ser Gly His Phe Phe Glu Gly Gln Cys Gly
    290                 295                 300
Gly Lys Gly Ala Ala Ser Arg Leu Gly Glu Asp Leu Lys Asp Pro Asp
305                 310                 315                 320
Ser His Ser Phe Pro Leu Ala Gln
                325
```

<210> 558
<211> 2289
<212> DNA
<213> Homo Sapiens

<400> 558

```
cctggcccgg tcgcggtcgc ggctctttcc agctcctggc agccgggcac ccgaaggaac      60
gggtcgtgca acgacgcagc tggacctggc ccagccatgg accgaaaagt ggcccgagaa     120
ttccggcata aggtggattt tctgattgaa aatgatgcag agaaggacta tctctatgat     180
gtgctgcgaa tgtaccacca gaccatggac gtggccgtgc tcgtgggaga cctgaagctg     240
gtcatcaatg aacccagccg tctgcctctg tttgatgcca ttcggccgct gatcccactg     300
aagcaccagg tggaatatga tcagctgacc ccccggcgct ccaggaagct gaaggaggtg     360
cgtctggacc gtctgcaccc cgaaggcctc ggcctgagtg tgcgtggtgg cctggagttt     420
ggctgtgggc tcttcatctc ccacctcatc aaaggcggtc aggcagacag cgtcgggctc     480
caggtagggg acgagatcgt ccggatcaat ggatattcca tctcctcctg tacccatgag     540
gaggtcatca acctcattcg aaccaagaaa actgtgtcca tcaaagtgag acacatcggc     600
ctgatccccg tgaaaagctc tcctgatgag cccctcactt ggcagtatgt ggatcagttt     660
gtgtcggaat ctgggggcgt gcgaggcagc ctgggctccc ctggaaatcg ggaaaacaag     720
gagaagaagg tcttcatcag cctggtaggc tcccgaggcc ttggctgcag catttccagc     780
ggccccatcc agaagcctgg catctttatc agccatgtga aacctggctc cctgtctgct     840
gaggtgggat tggagatagg ggaccagatt gtcgaagtca atggcgtcga cttctctaac     900
ctggatcaca aggaggctgt aaatgtgctg aaaaatagcc gcagcctgac catctccatt     960
gtagctgcag ctggccggga gctgttcatg acagaccggg agcggctggc agaggcgcgg    1020
cagcgtgagc tgcagcggca ggagcttctc atgcagaagc ggctggcgat ggagtccaac    1080
aagatcctcc aggagcagca ggagatggag cggcaaagga gaaaagaaat tgcccagaag    1140
gcagcagagg aaaatgagag ataccggaag gagatggaac agattgtaga ggaggaagag    1200
aagtttaaga agcaatggga agaagactgg ggctcaaagg aacagctact cttgcctaaa    1260
accatcactg ctgaggtaca cccagtaccc cttcgcaagc caaagtatga tcagggagtg    1320
gaacctgagc tcgagcccgc agatgacctg gatggaggca cggaggagca gggagagcag    1380
ccacaggaga tgttgaagag gatggtggtt tatcaagaca gcattcaaga caagatttcc    1440
```

```
ggaaatatga ggaaggcttt gacccctact ctatgttcac cccagagcag atcatgggga    1500
aggatgtccg gctcctacgc atcaagaagg agggatcctt agacctggcc ctggaaggcg    1560
gtgtggactc ccccattggg aaggtggtcg tttctgctgt gtatgagcgg ggagctgctg    1620
agcggcatgg tggcattgtg aaaggggacg agatcatggc aatcaacggc aagattgtga    1680
cagactacac cctggctgag gctgacgctg ccctgcagaa ggcctggaat cagggcgggg    1740
actggatcga ccttgtggtt gccgtctgcc ccccaaagga gtatgacgat gagctgacct    1800
tcttgctgaa gtccaaaagg ggaaaccaaa ttcacgcgtt aggaaacagt gagctccggc    1860
cccacctcgt gaacacaaag cctcggacca gccttgagag aggccacatg acacacacca    1920
gatggcatcc ttgggacctg aatctatcac ccaggaatct caaactccct ttggccctga    1980
accagggcca gataaggaac agctcgggcc actttttga aggccaatgt ggaggaaagg    2040
gagcagccag ccgtttggga gaagatctca aggatccaga ctctcattcc tttcctctgg    2100
cccagtgaat ttggtctctc ccagctttgg gggactcctt ccttgaaccc taataagacc    2160
ccactggagt ctctctctct ccatccctct cctctgccct ctgctctaat tgctgccagg    2220
attgtcactc caaaccttac tctgagctca ttaataaaat aaacagattt attttccagc    2280
ttaaaaaaa                                                           2289
```

<210> 559
<211> 481
<212> PRT
<213> Homo Sapiens

<400> 559

```
Met Asp Arg Lys Val Ala Arg Glu Phe Arg His Lys Val Asp Phe Leu
 1               5                  10                  15
Ile Glu Asn Asp Ala Glu Lys Asp Tyr Leu Tyr Asp Val Leu Arg Met
            20                  25                  30
Tyr His Gln Thr Met Asp Val Ala Val Leu Val Gly Asp Leu Lys Leu
        35                  40                  45
Val Ile Asn Glu Pro Ser Arg Leu Pro Leu Phe Asp Ala Ile Arg Pro
    50                  55                  60
Leu Ile Pro Leu Lys His Gln Val Glu Tyr Asp Gln Leu Thr Pro Arg
65                  70                  75                  80
Arg Ser Arg Lys Leu Lys Glu Val Arg Leu Asp Arg Leu His Pro Glu
                85                  90                  95
Gly Leu Gly Leu Ser Val Arg Gly Gly Leu Glu Phe Gly Cys Gly Leu
            100                 105                 110
Phe Ile Ser His Leu Ile Lys Gly Gly Gln Ala Asp Ser Val Gly Leu
        115                 120                 125
Gln Val Gly Asp Glu Ile Val Arg Ile Asn Gly Tyr Ser Ile Ser Ser
    130                 135                 140
Cys Thr His Glu Glu Val Ile Asn Leu Ile Arg Thr Lys Lys Thr Val
145                 150                 155                 160
Ser Ile Lys Val Arg His Ile Gly Leu Ile Pro Val Lys Ser Ser Pro
                165                 170                 175
Asp Glu Pro Leu Thr Trp Gln Tyr Val Asp Gln Phe Val Ser Glu Ser
            180                 185                 190
Gly Gly Val Arg Gly Ser Leu Gly Ser Pro Gly Asn Arg Glu Asn Lys
        195                 200                 205
Glu Lys Lys Val Phe Ile Ser Leu Val Gly Ser Arg Gly Leu Gly Cys
    210                 215                 220
Ser Ile Ser Ser Gly Pro Ile Gln Lys Pro Gly Ile Phe Ile Ser His
225                 230                 235                 240
Val Lys Pro Gly Ser Leu Ser Ala Glu Val Gly Leu Glu Ile Gly Asp
                245                 250                 255
Gln Ile Val Glu Val Asn Gly Val Asp Phe Ser Asn Leu Asp His Lys
```

```
            260                 265                 270
Glu Ala Val Asn Val Leu Lys Asn Ser Arg Ser Leu Thr Ile Ser Ile
        275                 280                 285
Val Ala Ala Ala Gly Arg Glu Leu Phe Met Thr Asp Arg Glu Arg Leu
    290                 295                 300
Ala Glu Ala Arg Gln Arg Glu Leu Gln Arg Gln Glu Leu Leu Met Gln
305                 310                 315                 320
Lys Arg Leu Ala Met Glu Ser Asn Lys Ile Leu Gln Glu Gln Gln Glu
                325                 330                 335
Met Glu Arg Gln Arg Arg Lys Glu Ile Ala Gln Lys Ala Ala Glu Glu
            340                 345                 350
Asn Glu Arg Tyr Arg Lys Glu Met Glu Gln Ile Val Glu Glu Glu Glu
        355                 360                 365
Lys Phe Lys Lys Gln Trp Glu Glu Asp Trp Gly Ser Lys Glu Gln Leu
    370                 375                 380
Leu Leu Pro Lys Thr Ile Thr Ala Glu Val His Pro Val Pro Leu Arg
385                 390                 395                 400
Lys Pro Lys Tyr Asp Gln Gly Val Glu Pro Glu Leu Glu Pro Ala Asp
                405                 410                 415
Asp Leu Asp Gly Gly Thr Glu Glu Gln Gly Glu Gln Pro Gln Glu Met
            420                 425                 430
Leu Lys Arg Met Val Val Tyr Gln Asp Ser Ile Gln Asp Lys Ile Ser
        435                 440                 445
Gly Asn Met Arg Lys Ala Leu Thr Pro Thr Leu Cys Ser Pro Gln Ser
    450                 455                 460
Arg Ser Trp Gly Arg Met Ser Gly Ser Tyr Ala Ser Arg Arg Arg Asp
465                 470                 475                 480
Pro
```

<210> 560
<211> 2409
<212> DNA
<213> Homo Sapiens

<400> 560

```
cctggcccgg tcgcggtcgc ggctctttcc agctcctggc agccgggcac ccgaaggaac      60
gggtcgtgca acgacgcagc tggacctggc ccagccatgg accgaaaagt ggcccgagaa     120
ttccggcata aggtggattt tctgattgaa aatgatgcag agaaggacta tctctatgat     180
gtgctgcgaa tgtaccacca gaccatggac gtggccgtgc tcgtgggaga cctgaagctg     240
gtcatcaatg aacccagccg tctgcctctg tttgatgcca ttcggccgct gatcccactg     300
aagcaccagg tggaatatga tcagctgacc ccccggcgct ccaggaagct gaaggaggtg     360
cgtctggacc gtctgcaccc cgaaggcctc ggcctgagtg tgcgtggtgg cctggagttt     420
ggctgtgggc tcttcatctc ccacctcatc aaaggcggtc aggcagacag cgtcgggctc     480
caggtagggg acgagatcgt ccggatcaat ggatattcca tctcctcctg tacccatgag     540
gaggtcatca acctcattcg aaccaagaaa actgtgtcca tcaaagtgag acacatcggc     600
ctgatccccg tgaaaagctc tcctgatgag cccctcactt ggcagtatgt ggatcagttt     660
gtgtcggaat ctgggggcgt gcgaggcagc ctgggctccc ctggaaatcg ggaaaacaag     720
gagaagaagg tcttcatcag cctggtaggc tcccgaggcc ttggctgcag catttccagc     780
ggccccatcc agaagcctgg catctttatc agccatgtga aacctggctc cctgtctgct     840
gaggtgggat tggagatagg ggaccagatt gtcgaagtca atggcgtcga cttctctaac     900
ctggatcaca aggaggctgt aaatgtgctg aaaaatagcc gcagcctgac catctccatt     960
gtagctgcag ctggccggga gctgttcatg acagaccggg agcggctggc agaggcgcgg    1020
cagcgtgagc tgcagcggca ggagcttctc atgcagaagc ggctggcgat ggagtccaac    1080
aagatcctcc aggagcagca ggagatggag cggcaaagga gaaaagaaat tgcccagaag    1140
```

```
gcagcagagg aaaatgagag ataccggaag gagatggaac agattgtaga ggaggaagag    1200
aagtttaaga agcaatggga agaagactgg ggctcaaagg aacagctact cttgcctaaa    1260
accatcactg ctgaggtaca cccagtaccc cttcgcaagc caaagtatga tcagggagtg    1320
gaacctgagc tcgagcccgc agatgacctg gatggaggca cggaggagca gggagagcag    1380
acattttgcc caagcccaca gcctccacga ggccctggcg tgtccaccat ctccaaacct    1440
gtcatggtcc accaggagcc caatttcatc tacaggccag ctgtgaaatc tgaagttctg    1500
ccacaggaga tgttgaagag gatggtggtt tatcaagaca gcattcaaga caagatttcc    1560
ggaaatatga ggaaggcttt gacccctact ctatgttcac cccagagcag atcatgggga    1620
aggatgtccg gctcctacgc atcaagaagg agggatcctt agacctggcc ctggaaggcg    1680
gtgtggactc ccccattggg aaggtggtcg tttctgctgt gtatgagcgg ggagctgctg    1740
agcggcatgg tggcattgtg aaaggggacg agatcatggc aatcaacggc aagattgtga    1800
cagactacac cctggctgag gctgacgctg ccctgcagaa ggcctggaat cagggcgggg    1860
actggatcga ccttgtggtt gccgtctgcc ccccaaagga gtatgacgat gagctgacct    1920
tcttgctgaa gtccaaaagg ggaaaccaaa ttcacgcgtt aggaaacagt gagctccggc    1980
cccacctcgt gaacacaaag cctcggacca gccttgagag aggccacatg acacacacca    2040
gatggcatcc ttgggacctg aatctatcac ccaggaatct caaactccct ttggccctga    2100
accagggcca gataaggaac agctcgggcc actttttga aggccaatgt ggaggaaagg    2160
gagcagccag ccgtttggga gaagatctca aggatccaga ctctcattcc tttcctctgg    2220
cccagtgaat ttggtctctc ccagctttgg gggactcctt ccttgaaccc taataagacc    2280
ccactggagt ctctctctct ccatccctct cctctgccct ctgctctaat tgctgccagg    2340
attgtcactc caaaccttac tctgagctca ttaataaaat aaacagattt attttccagc    2400
ttaaaaaaa                                                           2409
```

<210> 561
<211> 521
<212> PRT
<213> Homo Sapiens

<400> 561

```
Met Asp Arg Lys Val Ala Arg Glu Phe Arg His Lys Val Asp Phe Leu
 1               5                  10                  15
Ile Glu Asn Asp Ala Glu Lys Asp Tyr Leu Tyr Asp Val Leu Arg Met
            20                  25                  30
Tyr His Gln Thr Met Asp Val Ala Val Leu Val Gly Asp Leu Lys Leu
        35                  40                  45
Val Ile Asn Glu Pro Ser Arg Leu Pro Leu Phe Asp Ala Ile Arg Pro
    50                  55                  60
Leu Ile Pro Leu Lys His Gln Val Glu Tyr Asp Gln Leu Thr Pro Arg
65                  70                  75                  80
Arg Ser Arg Lys Leu Lys Glu Val Arg Leu Asp Arg Leu His Pro Glu
                85                  90                  95
Gly Leu Gly Leu Ser Val Arg Gly Gly Leu Glu Phe Gly Cys Gly Leu
            100                 105                 110
Phe Ile Ser His Leu Ile Lys Gly Gly Gln Ala Asp Ser Val Gly Leu
        115                 120                 125
Gln Val Gly Asp Glu Ile Val Arg Ile Asn Gly Tyr Ser Ile Ser Ser
    130                 135                 140
Cys Thr His Glu Glu Val Ile Asn Leu Ile Arg Thr Lys Lys Thr Val
145                 150                 155                 160
Ser Ile Lys Val Arg His Ile Gly Leu Ile Pro Val Lys Ser Ser Pro
                165                 170                 175
Asp Glu Pro Leu Thr Trp Gln Tyr Val Asp Gln Phe Val Ser Glu Ser
            180                 185                 190
Gly Gly Val Arg Gly Ser Leu Gly Ser Pro Gly Asn Arg Glu Asn Lys
        195                 200                 205
```

```
Glu Lys Lys Val Phe Ile Ser Leu Val Gly Ser Arg Gly Leu Gly Cys
    210                 215                 220
Ser Ile Ser Ser Gly Pro Ile Gln Lys Pro Gly Ile Phe Ile Ser His
225                 230                 235                 240
Val Lys Pro Gly Ser Leu Ser Ala Glu Val Gly Leu Glu Ile Gly Asp
                245                 250                 255
Gln Ile Val Glu Val Asn Gly Val Asp Phe Ser Asn Leu Asp His Lys
            260                 265                 270
Glu Ala Val Asn Val Leu Lys Asn Ser Arg Ser Leu Thr Ile Ser Ile
        275                 280                 285
Val Ala Ala Ala Gly Arg Glu Leu Phe Met Thr Asp Arg Glu Arg Leu
    290                 295                 300
Ala Glu Ala Arg Gln Arg Glu Leu Gln Arg Gln Glu Leu Leu Met Gln
305                 310                 315                 320
Lys Arg Leu Ala Met Glu Ser Asn Lys Ile Leu Gln Glu Gln Gln Glu
                325                 330                 335
Met Glu Arg Gln Arg Arg Lys Glu Ile Ala Gln Lys Ala Ala Glu Glu
            340                 345                 350
Asn Glu Arg Tyr Arg Lys Glu Met Glu Gln Ile Val Glu Glu Glu Glu
        355                 360                 365
Lys Phe Lys Lys Gln Trp Glu Glu Asp Trp Gly Ser Lys Glu Gln Leu
    370                 375                 380
Leu Leu Pro Lys Thr Ile Thr Ala Glu Val His Pro Val Pro Leu Arg
385                 390                 395                 400
Lys Pro Lys Tyr Asp Gln Gly Val Glu Pro Glu Leu Glu Pro Ala Asp
                405                 410                 415
Asp Leu Asp Gly Gly Thr Glu Glu Gln Gly Glu Gln Thr Phe Cys Pro
            420                 425                 430
Ser Pro Gln Pro Pro Arg Gly Pro Gly Val Ser Thr Ile Ser Lys Pro
        435                 440                 445
Val Met Val His Gln Glu Pro Asn Phe Ile Tyr Arg Pro Ala Val Lys
    450                 455                 460
Ser Glu Val Leu Pro Gln Glu Met Leu Lys Arg Met Val Val Tyr Gln
465                 470                 475                 480
Asp Ser Ile Gln Asp Lys Ile Ser Gly Asn Met Arg Lys Ala Leu Thr
                485                 490                 495
Pro Thr Leu Cys Ser Pro Gln Ser Arg Ser Trp Gly Arg Met Ser Gly
            500                 505                 510
Ser Tyr Ala Ser Arg Arg Arg Asp Pro
        515                 520
```

<210> 562
<211> 1445
<212> DNA
<213> Homo Sapiens

<400> 562

```
ctccggcagg gagtcctagc gcagactttg cggttcatgg agagtctctg ggagacaggc      60
acctgcggac gctgcagata agttacgacg cactgaaaga tgaaaattct aagctgagaa     120
gaaagctgaa tgaggttcag agcttctctg aagctcaaac agaaatggtg aggacgcttg     180
agcggaagtt agaagcaaaa atgatcaagg aggaaagcga ctaccacgac ctggagtcgg     240
tggttcagca ggtggagcag aacctggagc tgatgaccaa acgggctgta aaggcagaaa     300
accacgtcgt gaaactaaaa caggaaatca gtttgctcca ggcgcaggtc tccaacttcc     360
agcgagagaa tgaagccctg cggtgcggcc agggtgccag cctgaccgtg gtgaagcaga     420
acgccgacgt ggccctgcag aacctccggg tggtcatgaa cagtgcacag gcttccatca     480
```

```
agcaactggt ttccggagct gagacactga atcttgttgc cgaaatcctt aaatctatag     540
acagaatttc tgaagttaaa gacgaggagg aagactcttg aggacccctg ggtgttctca     600
gcatgaagct ccgtgtatac cctgaggtca ccaccgctcg atctaaatgt gcagttgtgt     660
ccttaaatat gcagtcttca cccagagtaa agtgttgatc gcaagagtcc agtgtcgtgc     720
cctcagccag ttcttggcca ccacaatggg agcagccctg gccgagttgt ctctgtggtt     780
tctatgcagc ccttcttggc gaaattcctg cgatcttata gattctaatg agctcttgga     840
agacattgtc ataaaagcca gtgattttaa gaaaaagagt ggttctggaa tcaatgtttt     900
ccagtcccat cccagaacat cagttgtaag ataagtacaa ttggttgtcc ttgatttcat     960
aagtagaaca aacactaaat gtgcctctga gatggccacc ccgggcaggg acctgtgcct    1020
tccgccgatg ctcagggctc cctctggctc ccgggtcact cttgtggccc cagtgggtgg    1080
tccctgcagt catggcctga gtgcgcaggg gccaccgcgt ggctgctgct gtcctcctcc    1140
ggggaccacg ggggaacaag gtcacacctt ccgtgctgtg aagctgtcca gatgtgcctc    1200
tttggctggg ggttttggtg gacgtttcaa gtggcatttt gtacaatgca ggttagaatt    1260
caggaatttc aagtatgtgc ccgggtntgt caggtcccag ttgcctttnt gacggccccc    1320
ctcagaggga cggcgatgag cactaaatgc ttttttgant attttcctat agatttttt     1380
taaaactttt ttttcctcct gttccaattg atagctttct tatttaataa attctgtagt    1440
tcacc                                                                1445
```

<210> 563
<211> 192
<212> PRT
<213> Homo Sapiens

<400> 563

```
Pro Ala Gly Ser Pro Ser Ala Asp Phe Ala Val His Gly Glu Ser Leu
 1               5                  10                  15
Gly Asp Arg His Leu Arg Thr Leu Gln Ile Ser Tyr Asp Ala Leu Lys
            20                  25                  30
Asp Glu Asn Ser Lys Leu Arg Arg Lys Leu Asn Glu Val Gln Ser Phe
        35                  40                  45
Ser Glu Ala Gln Thr Glu Met Val Arg Thr Leu Glu Arg Lys Leu Glu
    50                  55                  60
Ala Lys Met Ile Lys Glu Glu Ser Asp Tyr His Asp Leu Glu Ser Val
65                  70                  75                  80
Val Gln Gln Val Glu Gln Asn Leu Glu Leu Met Thr Lys Arg Ala Val
                85                  90                  95
Lys Ala Glu Asn His Val Val Lys Leu Lys Gln Glu Ile Ser Leu Leu
            100                 105                 110
Gln Ala Gln Val Ser Asn Phe Gln Arg Glu Asn Glu Ala Leu Arg Cys
        115                 120                 125
Gly Gln Gly Ala Ser Leu Thr Val Val Lys Gln Asn Ala Asp Val Ala
    130                 135                 140
Leu Gln Asn Leu Arg Val Val Met Asn Ser Ala Gln Ala Ser Ile Lys
145                 150                 155                 160
Gln Leu Val Ser Gly Ala Glu Thr Leu Asn Leu Val Ala Glu Ile Leu
                165                 170                 175
Lys Ser Ile Asp Arg Ile Ser Glu Val Lys Asp Glu Glu Glu Asp Ser
            180                 185                 190
```

<210> 564
<211> 1226
<212> DNA
<213> Homo Sapiens

<400> 564

```
ctgggccgcg aggcgcggag cttgggagcg gagcccaggc cgtgccgcgc ggcgccatga      60
agggcaagga ggagaaggag ggcggcgcac ggctgggcgc tggcggcgga agccccgaga     120
agagcccgag cgcgcaggag ctcaaggagc agggcaatcg tctgttcgtg ggccgaaagt     180
acccggaggc ggcggcctgc tacggccgcg cgatcacccg gaacccgctg gtggccgtgt     240
attacaccaa ccgggccttg tgctacctga agatgcagca gcacgagcag gccctggccg     300
actgccggcg cgccctggag ctggacgggc agtctgtgaa ggcgcacttc ttcctggggc     360
agtgccagct ggagatggag agctatgatg aggccatcgc caatctgcag cgagcttaca     420
gcctggccaa ggagcagcgg ctgaacttcg gggacgacat ccccagcgct cttcgaatcg     480
cgaagaagaa gcgctggaac agcattgagg agcggcgcat ccaccaggag agcgagctgc     540
actcctacct ctccaggctc attgccgcgg agcgtgagag ggagctggaa gagtgccagc     600
gaaaccacga gggtgatgag gacgacagcc acgtccgggc ccagcaggcc tgcattgagg     660
ccaagcacga caagtacatg gcggacatgg acgagctttt ttctcaggtg gatgagaaga     720
ggaagaagcg agacatcccc gactacctgt gtggcaagat cagctttgag ctgatgcggg     780
agccgtgcat cacgcccagt ggcatcacct acgaccgcaa ggacatcgag gagcacctgc     840
agcgtgtggg tcattttgac ccggtgaccg ggagcccccc gacccaggaa cagttcatcc     900
ccaacttggc tatgaaggag gttattgacg cattcatctc tgagaatggc tgggtggagg     960
actactgagg ttccctgccc tacctggcgt cctggtccag gggagccctg ggcagaagcc    1020
cccggccccc aaacatagtt tatgtttttg gccaccccga ccgcttcccc caagttctgc    1080
tgttggactc tggactgttt cccctctcag catcgctttt gctgggccgt gattgtcccc    1140
tttgtgggct ggaaaagcag gtgagggtgg gctgggctga ggccattgcc gccactatct    1200
gtgtaataaa atccgtgagc acgaaa                                         1226
```

<210> 565
<211> 303
<212> PRT
<213> Homo Sapiens

<400> 565

```
Met Lys Gly Lys Glu Glu Lys Glu Gly Gly Ala Arg Leu Gly Ala Gly
 1               5                  10                  15
Gly Gly Ser Pro Glu Lys Ser Pro Ser Ala Gln Glu Leu Lys Glu Gln
            20                  25                  30
Gly Asn Arg Leu Phe Val Gly Arg Lys Tyr Pro Glu Ala Ala Ala Cys
        35                  40                  45
Tyr Gly Arg Ala Ile Thr Arg Asn Pro Leu Val Ala Val Tyr Tyr Thr
    50                  55                  60
Asn Arg Ala Leu Cys Tyr Leu Lys Met Gln Gln His Glu Gln Ala Leu
65                  70                  75                  80
Ala Asp Cys Arg Arg Ala Leu Glu Leu Asp Gly Gln Ser Val Lys Ala
                85                  90                  95
His Phe Phe Leu Gly Gln Cys Gln Leu Glu Met Glu Ser Tyr Asp Glu
            100                 105                 110
Ala Ile Ala Asn Leu Gln Arg Ala Tyr Ser Leu Ala Lys Glu Gln Arg
        115                 120                 125
Leu Asn Phe Gly Asp Asp Ile Pro Ser Ala Leu Arg Ile Ala Lys Lys
    130                 135                 140
Lys Arg Trp Asn Ser Ile Glu Glu Arg Arg Ile His Gln Glu Ser Glu
145                 150                 155                 160
Leu His Ser Tyr Leu Ser Arg Leu Ile Ala Ala Glu Arg Glu Arg Glu
                165                 170                 175
Leu Glu Glu Cys Gln Arg Asn His Glu Gly Asp Glu Asp Asp Ser His
            180                 185                 190
Val Arg Ala Gln Gln Ala Cys Ile Glu Ala Lys His Asp Lys Tyr Met
        195                 200                 205
Ala Asp Met Asp Glu Leu Phe Ser Gln Val Asp Glu Lys Arg Lys Lys
```

```
    210                 215                 220
Arg Asp Ile Pro Asp Tyr Leu Cys Gly Lys Ile Ser Phe Glu Leu Met
225                 230                 235                 240
Arg Glu Pro Cys Ile Thr Pro Ser Gly Ile Thr Tyr Asp Arg Lys Asp
                245                 250                 255
Ile Glu Glu His Leu Gln Arg Val Gly His Phe Asp Pro Val Thr Gly
            260                 265                 270
Ser Pro Leu Thr Gln Glu Gln Phe Ile Pro Asn Leu Ala Met Lys Glu
        275                 280                 285
Val Ile Asp Ala Phe Ile Ser Glu Asn Gly Trp Val Glu Asp Tyr
    290                 295                 300
```

<210> 566
<211> 1857
<212> DNA
<213> Homo Sapiens

<400> 566

```
gtgaggggct cctttgggca ggggtagtgt ttggtgtccc tgtcttgcgt gatattgaca      60
aactgaagct ttcctgcacc actggactta aggaanagtg tactcgtagg cggacagctt     120
tagtggccgg ccggccgctc tcatcccccg taaggagcag agtcctttgt actgaccaag     180
atgagcaaca tctacatcca ggagcctccc acgaatggga aggttttatt gaaaactaca     240
gctggagata ttgacataga gttgtggtcc aaagaagctc ctaaagcttg cagaaatttt     300
atcccaactt tgtttggaag cttattatga caataccatt tttcatagag ttgtgcctgg     360
tttcatagtc caaggcggag atcctactgg cacagggagt ggtggagagt ctatctatgg     420
agcgccattc aaagatgaat ttcattcacg gttgcgtttt aatcggagag gactggttgc     480
catggcaaat gctggttctc atgataatgg cacccacttt ttcttcacac tgggtcgagc     540
agatgaactt aacaataagc ataccatctt tggaaaggtt acaggggata cagtatataa     600
catgttgcga ctgtcagaag tagacattga tgatgacgaa agaccacata atccacacaa     660
aataaaaagc tgtgaggttt tgtttaatcc ttttgatgac atcattccaa gggaaattaa     720
aaggctgaaa aaagagaaac cagaggagga agtaaagaaa ttgaaaccca aaggcacaaa     780
aaattttagt ttactttcat ttggagagga agctgaggaa gaagaagagg aagtaaatcg     840
agttagtcag agcatgaagg gcaaaagcaa aagtagtcat gacttgctta aggatgatcc     900
acatctcagt tctgttccag ttgtagaaag tgaaaaaggt gatgcaccag atttagttga     960
tgatggagaa gatgaaagtg cagagcatga tgaatatatt gatggtgatg aaaagaacct    1020
gatgagagaa agaattgcca aaaaattaaa aaaggacaca agtgcgaatg ttaaatcagc    1080
tggagaagga gaagtggaga agaaatcagt cagccgcagt gaagagctca gaaaagaagc    1140
aagacaatta aaacgggaac tcttagcagc aaaacaaaaa aaagtagaaa atgcagcaaa    1200
acaagcagaa aaaagaagtg aagaggaaga agcccctcca gatggtgctg ttgccgaata    1260
cagaagagaa aagcaaaagt atgaagcttt gaggaagcaa cagtcaaaga agggaacttc    1320
ccgggaagat cagacccttg cactgctgaa ccagtttaaa tctaaactca ctcaagcaat    1380
tgctgaaaca cctgaaaatg acattcctga aacagaagta gaagatgatg aaggatggat    1440
gtcacatgta cttcagtttg aggataaaag cagaaaagtg aaagatgcaa gcatgcaaga    1500
ctcagataca tttgaaatct atgatcctcg gaatccagtg aataaaagaa ggagggaaga    1560
aagcaaaaag ctgatgagag agaaaaaaga aagaagataa aatgagaata atgataacca    1620
gaacttgctg gaaatgtgcc tacaatggcc ttgtaacagc cattgttccc aacagcatca    1680
cttaggggtg tgaaaagaag tatttttgaa cctgttgtct ggttttgaaa aacaattatc    1740
ttgttttgca aattgtggaa tgatgtaagc aaatgctttt ggttactggt acatgtgttt    1800
tttcctagct gacctttttat attgctaaat ctgaaataaa ataactttcc ttccaaa      1857
```

<210> 567
<211> 372
<212> PRT
<213> Homo Sapiens

<400> 567
Met Ala Asn Ala Gly Ser His Asp Asn Gly Thr His Phe Phe Phe Thr
1 5 10 15
Leu Gly Arg Ala Asp Glu Leu Asn Asn Lys His Thr Ile Phe Gly Lys
20 25 30
Val Thr Gly Asp Thr Val Tyr Asn Met Leu Arg Leu Ser Glu Val Asp
35 40 45
Ile Asp Asp Asp Glu Arg Pro His Asn Pro His Lys Ile Lys Ser Cys
50 55 60
Glu Val Leu Phe Asn Pro Phe Asp Asp Ile Ile Pro Arg Glu Ile Lys
65 70 75 80
Arg Leu Lys Lys Glu Lys Pro Glu Glu Glu Val Lys Lys Leu Lys Pro
85 90 95
Lys Gly Thr Lys Asn Phe Ser Leu Leu Ser Phe Gly Glu Glu Ala Glu
100 105 110
Glu Glu Glu Glu Glu Val Asn Arg Val Ser Gln Ser Met Lys Gly Lys
115 120 125
Ser Lys Ser Ser His Asp Leu Leu Lys Asp Asp Pro His Leu Ser Ser
130 135 140
Val Pro Val Val Glu Ser Glu Lys Gly Asp Ala Pro Asp Leu Val Asp
145 150 155 160
Asp Gly Glu Asp Glu Ser Ala Glu His Asp Glu Tyr Ile Asp Gly Asp
165 170 175
Glu Lys Asn Leu Met Arg Glu Arg Ile Ala Lys Lys Leu Lys Lys Asp
180 185 190
Thr Ser Ala Asn Val Lys Ser Ala Gly Glu Gly Glu Val Glu Lys Lys
195 200 205
Ser Val Ser Arg Ser Glu Glu Leu Arg Lys Glu Ala Arg Gln Leu Lys
210 215 220
Arg Glu Leu Leu Ala Ala Lys Gln Lys Lys Val Glu Asn Ala Ala Lys
225 230 235 240
Gln Ala Glu Lys Arg Ser Glu Glu Glu Glu Ala Pro Pro Asp Gly Ala
245 250 255
Val Ala Glu Tyr Arg Arg Glu Lys Gln Lys Tyr Glu Ala Leu Arg Lys
260 265 270
Gln Gln Ser Lys Lys Gly Thr Ser Arg Glu Asp Gln Thr Leu Ala Leu
275 280 285
Leu Asn Gln Phe Lys Ser Lys Leu Thr Gln Ala Ile Ala Glu Thr Pro
290 295 300
Glu Asn Asp Ile Pro Glu Thr Glu Val Glu Asp Asp Glu Gly Trp Met
305 310 315 320
Ser His Val Leu Gln Phe Glu Asp Lys Ser Arg Lys Val Lys Asp Ala
325 330 335
Ser Met Gln Asp Ser Asp Thr Phe Glu Ile Tyr Asp Pro Arg Asn Pro
340 345 350
Val Asn Lys Arg Arg Arg Glu Glu Ser Lys Lys Leu Met Arg Glu Lys
355 360 365
Lys Glu Arg Arg
370

<210> 568
<211> 1537
<212> DNA
<213> Homo Sapiens

<400> 568
gccgcgcgcc gatcggtcgt taccgcgagg cgctggtggc cttcaggctg gacggcgcgg 60
gtcagccctg gttcgccggc ttctgggtct ttgaacagcc gcgatgtcga tcttcacccc 120
caccaaccag atccgcctaa ccaatgtggc cgtggtacgg atgaagcgtg ccgggaagcg 180
cttcgaaatc gcctgctaca aaaacaaggt cgtcggctgg cggagcggcg tggaaaaaga 240
cctcgatgaa gttctgcaga cccactcagt gtttgtaaat gtttctaaag gtcaggttgc 300
caaaaaggaa gatctcatca gtgcgtttgg aacagatgac caaactgaaa tctgtaagca 360
gattttgact aaaggagaag ttcaagtatc agataaagaa agacacacac aactggagca 420
gatgtttagg gacattgcaa ctattgtggc agacaaatgt gtgaatcctg aaacaaagag 480
accatacacc gtgatcctta ttgagagagc catgaaggac atccactatt cggtgaaaac 540
caacaagagt acaaaacagc aggctttgga agtgataaag cagttaaaag agaaaatgaa 600
gatagaacgt gctcacatga agcttcggtt catccttcca gtcaatgaag gcaagaactg 660
aaagaaaagc tcaagccact gatcaaggtc atagaaagtg aagattatgg ccaacagtta 720
gaaatcgtat gtctgattga cccgggctgc ttccgagaaa ttgatgagct aataaaaaag 780
gaaactaaag gcaaaggttc tttggaagta ctcaatctga aagatgtaga agaaggagat 840
gagaaatttg aatgacaccc atcaatctct tcacctctaa aacactaaag tgtttccgtt 900
tccgacggca ctgtttcatg tctgtggtct gccaaatact tgcttaaact atttgacatt 960
ttctatcttt gtgttaacag tggacacagc aaggctttcc tacataagta taataatgtg 1020
ggaatgattt ggttttaatt ataaactggg gtctaaatcc taaagcaaaa ttgaaactcc 1080
aagatgcaaa gtccagagtg gcattttgct actctgtctc atgccttgat agctttccaa 1140
aatgaaagtt acttgangca gctcttgtgg gtgaaaagtt atttgtacag tagagtaaga 1200
ttattagggg tatgtctata caacaaaagg gggggtcttt cctaaaaaag aaaacatatg 1260
atgcttcatt tctacttaat ggaacttgtg ttctgagggt cattatggta tcgtaatgta 1320
aagcttggat gatgttcctg attatttgag gaacagatat aggaaaattg tgccggaatt 1380
acctttcatt gaacatgctg ccataaatta ggttatttt ggttaaaaaa taaaagtcaa 1440
ttatttttaa tttttaaagt ttataatata tattaatata ggtaaaattg tatgtaatca 1500
ataaaaccaa ttttatgttt attaaactta aaaaaaa 1537

<210> 569
<211> 210
<212> PRT
<213> Homo Sapiens

<400> 569
Ala Ala Arg Arg Ser Val Val Thr Ala Arg Arg Trp Trp Pro Ser Gly
1 5 10 15
Trp Thr Ala Arg Val Ser Pro Gly Ser Pro Ala Ser Gly Ser Leu Asn
20 25 30
Ser Arg Asp Val Asp Leu His Pro His Gln Pro Asp Pro Pro Asn Gln
35 40 45
Cys Gly Arg Gly Thr Asp Glu Ala Cys Arg Glu Ala Leu Arg Asn Arg
50 55 60
Leu Leu Gln Lys Gln Val Val Gly Trp Arg Ser Gly Val Glu Lys Asp
65 70 75 80
Leu Asp Glu Val Leu Gln Thr His Ser Val Phe Val Asn Val Ser Lys
85 90 95
Gly Gln Val Ala Lys Lys Glu Asp Leu Ile Ser Ala Phe Gly Thr Asp
100 105 110
Asp Gln Thr Glu Ile Cys Lys Gln Ile Leu Thr Lys Gly Glu Val Gln
115 120 125
Val Ser Asp Lys Glu Arg His Thr Gln Leu Glu Gln Met Phe Arg Asp
130 135 140
Ile Ala Thr Ile Val Ala Asp Lys Cys Val Asn Pro Glu Thr Lys Arg
145 150 155 160
Pro Tyr Thr Val Ile Leu Ile Glu Arg Ala Met Lys Asp Ile His Tyr

```
                165                 170                 175
Ser Val Lys Thr Asn Lys Ser Thr Lys Gln Gln Ala Leu Glu Val Ile
            180                 185                 190
Lys Gln Leu Lys Glu Lys Met Lys Ile Glu Arg Ala His Met Lys Leu
        195                 200                 205
Arg Phe
    210
```

<210> 570
<211> 1211
<212> DNA
<213> Homo Sapiens

<400> 570

```
accatctttg gaaaggttac aggggtatac agtatataac atgttgcgac tgtcagaagt      60
agacattgat gatgacgaaa gaccacataa tccacacaaa ataaaaagct gtgaggtttt     120
gtttaatcct tttgatgaca tcattccaag ggaaattaaa aggctgaaaa aagagaaacc     180
agaggaggaa gtaaagaaat tgaaacccaa aggcacaaaa aattttagtt tactttcatt     240
tggagaggaa gctgaggaag aagaggagga agtaaatcga gttagtcaga gcatgaaggg     300
caaaagcaaa agtagtcatg acttgcttaa ggatgatcca catctcagtt ctgttccagt     360
tgtagaaagt gaaaaaggtg atgcagcaga tttagttgat gatggagaag atgaaagtgc     420
agagcatgat gaatatattg atggtgatga aaagaacctg atgagagaaa gaattgccaa     480
aaaattaaaa aaggacacaa gtgcgaatgt taaatcagct ggagaaggag aagtggagaa     540
gaaatcagtc agccgcagtg aagagctcag aaaagaagca agacaattaa aacgggaact     600
cttagcagca gaacaaaaaa aagtagaaaa tgcagcaaaa caagcagaaa aaagaagtga     660
agaggaagaa gcccctccag atggtgctgt tgccgaatac agaagagaaa agcaaaagta     720
tgaagctctg aggaagcaac agtcaaagaa gggaacttcc cgggaagatc agacccttgc     780
actgctgaac cagtttaaat ctaaactcac tcaagcaatt gctgaaacgc ctgaaaatga     840
cattcctgaa acagaagtag aagatgatga aggatggatg tcacatgtac ttcagtttga     900
ggataaaagc agaaaagtga aagatgcaag catgcaagac tcagatacat ttgaaatcta     960
tgatcctcgg aatccagtga ataaaagaag gagggaagaa agcaaaaagc tgatgagaga    1020
gaaaaaagaa agaagataaa atgagaataa tgataaccag aacttgctgg aaatgtgcct    1080
acaatggcct tgtaacagcc attgttccca acagcatcac ttaggggtgt gaaaagaagt    1140
atttttgaac ctgttgtctg gttttgaaaa acaattatct tgttttgcaa attgtggaat    1200
gatgtaagca a                                                        1211
```

<210> 571
<211> 354
<212> PRT
<213> Homo Sapiens

<400> 571

```
Pro Ser Leu Glu Arg Leu Gln Gly Tyr Thr Val Tyr Asn Met Leu Arg
 1               5                  10                  15
Leu Ser Glu Val Asp Ile Asp Asp Asp Glu Arg Pro His Asn Pro His
            20                  25                  30
Lys Ile Lys Ser Cys Glu Val Leu Phe Asn Pro Phe Asp Asp Ile Ile
        35                  40                  45
Pro Arg Glu Ile Lys Arg Leu Lys Lys Glu Lys Pro Glu Glu Glu Val
    50                  55                  60
Lys Lys Leu Lys Pro Lys Gly Thr Lys Asn Phe Ser Leu Leu Ser Phe
65                  70                  75                  80
Gly Glu Glu Ala Glu Glu Glu Glu Glu Glu Val Asn Arg Val Ser Gln
                85                  90                  95
Ser Met Lys Gly Lys Ser Lys Ser Ser His Asp Leu Leu Lys Asp Asp
```

```
            100                 105                 110
Pro His Leu Ser Ser Val Pro Val Val Glu Ser Glu Lys Gly Asp Ala
        115                 120                 125
Ala Asp Leu Val Asp Asp Gly Glu Asp Glu Ser Ala Glu His Asp Glu
    130                 135                 140
Tyr Ile Asp Gly Asp Glu Lys Asn Leu Met Arg Glu Arg Ile Ala Lys
145                 150                 155                 160
Lys Leu Lys Lys Asp Thr Ser Ala Asn Val Lys Ser Ala Gly Glu Gly
                165                 170                 175
Glu Val Glu Lys Lys Ser Val Ser Arg Ser Glu Glu Leu Arg Lys Glu
            180                 185                 190
Ala Arg Gln Leu Lys Arg Glu Leu Leu Ala Ala Glu Gln Lys Lys Val
        195                 200                 205
Glu Asn Ala Ala Lys Gln Ala Glu Lys Arg Ser Glu Glu Glu Glu Ala
    210                 215                 220
Pro Pro Asp Gly Ala Val Ala Glu Tyr Arg Arg Glu Lys Gln Lys Tyr
225                 230                 235                 240
Glu Ala Leu Arg Lys Gln Gln Ser Lys Lys Gly Thr Ser Arg Glu Asp
                245                 250                 255
Gln Thr Leu Ala Leu Leu Asn Gln Phe Lys Ser Lys Leu Thr Gln Ala
            260                 265                 270
Ile Ala Glu Thr Pro Glu Asn Asp Ile Pro Glu Thr Glu Val Glu Asp
        275                 280                 285
Asp Glu Gly Trp Met Ser His Val Leu Gln Phe Glu Asp Lys Ser Arg
    290                 295                 300
Lys Val Lys Asp Ala Ser Met Gln Asp Ser Asp Thr Phe Glu Ile Tyr
305                 310                 315                 320
Asp Pro Arg Asn Pro Val Asn Lys Arg Arg Arg Glu Glu Ser Lys Lys
                325                 330                 335
Leu Met Arg Glu Lys Lys Glu Arg Arg Ile Leu Pro Val Asn Glu Gly
            340                 345                 350
Lys Asn
```

<210> 572
<211> 604
<212> DNA
<213> Homo Sapiens

<400> 572

```
ccttcggcaa aaaattttgg tcccaacttt ttgttccatt ccaaaagggc ttaccttcat      60
tccctttagc aacagggccc ccaagaagct cccgttcatt cacccttacc ttggccccca     120
ggttggaccc ccaaaggctc ccttacccca aagtgggtgg ttgaataaat cttctcagtt     180
ccctggctcc caaggcccat tgaagaagat tgtacaaggc gtgcctcaag taccccgagt     240
ggaaacagaa gcacctgcct cacttcaagc cgtggctgca cccggagcag agcccgttgc     300
cgagcctggc gctgtcggag ctgtcggtgc agcatgcgga ctcactggag aacatcgacg     360
agagcgcggt ggccgagagc agagaggagc ggatgggcgg cgcgggcggc gagggcagcg     420
acgacgacac cttcacctga gcccgcaccg cttcagggac ggagacagga ccgggcgagc     480
cctggggcgg cggccgctcc tgcactttct ccctcccccc acccggcacc tggtggcacc     540
gggccaggcc caggcgggtg ctgcagcctg gctggacaga gcccaataaa cggatcccac     600
agcc                                                                 604
```

<210> 573
<211> 195
<212> PRT

<213> Homo Sapiens

<400> 573

```
Leu Arg Gln Lys Ile Leu Val Pro Thr Phe Cys Ser Ile Pro Lys Gly
 1               5                  10                  15
Leu Thr Phe Ile Pro Phe Ser Asn Arg Ala Pro Lys Lys Leu Pro Phe
            20                  25                  30
Ile His Pro Tyr Leu Gly Pro Gln Val Gly Pro Pro Lys Ala Pro Leu
        35                  40                  45
Pro Gln Ser Gly Trp Leu Asn Lys Ser Ser Gln Phe Pro Gly Ser Gln
    50                  55                  60
Gly Pro Leu Lys Lys Ile Val Gln Gly Val Pro Gln Val Pro Arg Val
65                  70                  75                  80
Glu Thr Glu Ala Pro Ala Ser Leu Gln Ala Val Ala Ala Pro Gly Ala
                85                  90                  95
Glu Pro Val Ala Glu Pro Gly Ala Val Gly Ala Val Gly Ala Ala Cys
            100                 105                 110
Gly Leu Thr Gly Glu His Arg Arg Glu Arg Gly Gly Arg Glu Gln Arg
        115                 120                 125
Gly Ala Asp Gly Arg Arg Gly Arg Arg Gly Gln Arg Arg Arg His Leu
    130                 135                 140
His Leu Ser Pro His Arg Phe Arg Asp Gly Asp Arg Thr Gly Arg Ala
145                 150                 155                 160
Leu Gly Arg Arg Pro Leu Leu His Phe Leu Pro Ser Pro Thr Arg His
                165                 170                 175
Leu Val Ala Pro Gly Gln Ala Gln Ala Gly Ala Ala Ala Trp Leu Asp
            180                 185                 190
Arg Ala Gln
        195
```

<210> 574
<211> 742
<212> DNA
<213> Homo Sapiens

<400> 574

```
cccaccaggg ccccctcgat gcagagacag aggtcggtgc tgaccgctgc acgtcgactg      60
cctaccagga gcagaggccc caggtggagc aagttggcaa agtcgctcct ctctccccag     120
ggctgccggc aatgggggg cctggccccg gcccctgtga ggaccccgcg ggtgctgggg     180
gagcaggtgc agggggctcc gagcccctgg tgactgtcac cgtgcagtgc gccttcacag     240
tggccctgag ggcaggaaga ggagccgacc tgtccagcct gcgggcactg ctgggccaag     300
ccttccttca ccaggcccag cttgggcaat tcagttacct agccccaggt gaggacgggc     360
actgggtccc catccccgag gaggagtcgc tgcagagggc ctggcaggac gcagctgcct     420
gccccagggg gctgcagctg cagtgcaggg gagccggggg tcggccggtc ctttaccagg     480
tggtggccca gcacagatac tccgcccagg ggccagagga cctgggcttc cgacaggggg     540
acacggtgga cgtcctgtgt gaagtggacc aggcatggct ggagggccac tgtgacggcc     600
gcatcggcat cttccccaag tgcttcgtgg tccccgccgg ccctcggatg tcaggagccc     660
ccggccgcct gccccgatcc cagcagggag atcagcccta atgatgctgt gtccatgatg     720
cttttaataa aaacaacccc ca                                              742
```

<210> 575
<211> 232
<212> PRT
<213> Homo Sapiens

<400> 575

```
His Gln Gly Pro Leu Asp Ala Glu Thr Glu Val Gly Ala Asp Arg Cys
 1               5                  10                  15
Thr Ser Thr Ala Tyr Gln Glu Gln Arg Pro Gln Val Glu Gln Val Gly
            20                  25                  30
Lys Val Ala Pro Leu Ser Pro Gly Leu Pro Ala Met Gly Gly Pro Gly
        35                  40                  45
Pro Gly Pro Cys Glu Asp Pro Ala Gly Ala Gly Gly Ala Gly Ala Gly
    50                  55                  60
Gly Ser Glu Pro Leu Val Thr Val Thr Val Gln Cys Ala Phe Thr Val
65                  70                  75                  80
Ala Leu Arg Ala Gly Arg Gly Ala Asp Leu Ser Ser Leu Arg Ala Leu
                85                  90                  95
Leu Gly Gln Ala Phe Leu His Gln Ala Gln Leu Gly Gln Phe Ser Tyr
            100                 105                 110
Leu Ala Pro Gly Glu Asp Gly His Trp Val Pro Ile Pro Glu Glu Glu
        115                 120                 125
Ser Leu Gln Arg Ala Trp Gln Asp Ala Ala Ala Cys Pro Arg Gly Leu
    130                 135                 140
Gln Leu Gln Cys Arg Gly Ala Gly Gly Arg Pro Val Leu Tyr Gln Val
145                 150                 155                 160
Val Ala Gln His Arg Tyr Ser Ala Gln Gly Pro Glu Asp Leu Gly Phe
                165                 170                 175
Arg Gln Gly Asp Thr Val Asp Val Leu Cys Glu Val Asp Gln Ala Trp
            180                 185                 190
Leu Glu Gly His Cys Asp Gly Arg Ile Gly Ile Phe Pro Lys Cys Phe
        195                 200                 205
Val Val Pro Ala Gly Pro Arg Met Ser Gly Ala Pro Gly Arg Leu Pro
    210                 215                 220
Arg Ser Gln Gln Gly Asp Gln Pro
225                 230
```

<210> 576
<211> 1087
<212> DNA
<213> Homo Sapiens

<400> 576

```
aagatgatgc ctagtaaatt acagaagaac aaacagagac tgcgaaacga tcctctcaat      60
caaaataagg gtaaaccaga cttgaataca acattgccaa ttagacaaac agcatcaatt     120
ttcaaacaac cggtaaccaa agtcacaaat catcctagta ataaagtgaa atcagaccca     180
caacgaatga atgaacagcc acgtcagctt ttctgggaga agaggctaca aggacttagt     240
gcatcagatg taacagaaca aattataaaa accatggaac tacccaaagg tcttcaagga     300
gttggtccag gtagcaatga tgagaccctt ttatctgctg ttgccagtgc tttgcacaca     360
agctctgcgc caatcacagg gcaagtctcc gctgctgtgg aaaagaaccc tgctgtttgg     420
cttaacacat ctcaacccct ctgcaaagct tttattgtca cagatgaaga catcaggaaa     480
caggaagagc gagtacagca agtacgcaag aaattggaag aagcactgat ggcagacatc     540
ttgtcgcgag ctgctgatac agaagagatg gatattgaaa tggacagtgg agatgaagcc     600
taagaatatg atcaggtaac tttcgaccga ctttccccaa gagaaaattc ctagaaattg     660
aacaaaaatg tttccactgg cttttgcctg taagaaaaaa aatgtacccg agcacataga     720
gctttttaat agcactaacc aatgcctttt tagatgtatt tttgatgtat atatctatta     780
ttcaaaaaat catgtttatt ttgagtccta ggacttaaaa ttagtctttt gtaatatcaa     840
gcaggaccct aagatgaagc tgagcttttg atgccaggtg caatttactg gaaatgtagc     900
acttacgtaa aacatttgtt tcccccacag ttttaataag aacagatcag gaattctaaa     960
taaatttccc agttaaagat tattgtgact tcactgtata taaacatatt tttatacttt    1020
```

attgaaaggg gacacctgta cattcttcca tcgtcactgt aaagacaaat aaatgattat 1080
attcaca 1087

<210> 577
<211> 200
<212> PRT
<213> Homo Sapiens

<400> 577
Lys Met Met Pro Ser Lys Leu Gln Lys Asn Lys Gln Arg Leu Arg Asn
1 5 10 15
Asp Pro Leu Asn Gln Asn Lys Gly Lys Pro Asp Leu Asn Thr Thr Leu
20 25 30
Pro Ile Arg Gln Thr Ala Ser Ile Phe Lys Gln Pro Val Thr Lys Val
35 40 45
Thr Asn His Pro Ser Asn Lys Val Lys Ser Asp Pro Gln Arg Met Asn
50 55 60
Glu Gln Pro Arg Gln Leu Phe Trp Glu Lys Arg Leu Gln Gly Leu Ser
65 70 75 80
Ala Ser Asp Val Thr Glu Gln Ile Ile Lys Thr Met Glu Leu Pro Lys
85 90 95
Gly Leu Gln Gly Val Gly Pro Gly Ser Asn Asp Glu Thr Leu Leu Ser
100 105 110
Ala Val Ala Ser Ala Leu His Thr Ser Ser Ala Pro Ile Thr Gly Gln
115 120 125
Val Ser Ala Ala Val Glu Lys Asn Pro Ala Val Trp Leu Asn Thr Ser
130 135 140
Gln Pro Leu Cys Lys Ala Phe Ile Val Thr Asp Glu Asp Ile Arg Lys
145 150 155 160
Gln Glu Glu Arg Val Gln Gln Val Arg Lys Lys Leu Glu Glu Ala Leu
165 170 175
Met Ala Asp Ile Leu Ser Arg Ala Ala Asp Thr Glu Glu Met Asp Ile
180 185 190
Glu Met Asp Ser Gly Asp Glu Ala
195 200

<210> 578
<211> 2569
<212> DNA
<213> Homo Sapiens

<400> 578
aagagtaaaa gctactcttt cagagagaaa aataggagat tcatgtgaca aagatttgcc 60
tctgaaattt tgtgagttcc cacagaagac tataatgcct ggatttaaaa caactgtata 120
tgtttctcat ataaatgacc tttcagactt ttatgttcaa ctaatagaag atgaagctga 180
aattagtcat ctttcagaga gattaaacag tgttaaaaca aggcccgaat attatgtagg 240
tccacctttg caaagaggag atatgatatg tgctgttttc ccagaagata atttatggta 300
tcgtgctgtg atcaaggagc aacaacccaa tgaccttctc tctgtgcagt ttatagatta 360
tggcaatgtt tctgtggttc atactaacaa aataggtagg cttgaccttg ttaatgcaat 420
attgccgggg ttgtgcattc attgctcctt gcagggattt gaggttcctg acaataaaaa 480
ttctaagaaa atgatgcatt acttttccca acggaccagc gaggctgcaa taagatgtga 540
atttgttaaa tttcaagaca gatgggaagt tattcttgct gatgaacatg ggatcatagc 600
agatgatatg attagcaggt atgctctcag tgaaaaatct caagtagaac tttctaccca 660
agtaattaaa agtgccagtt caaagtctgt taacaaatca gacattgaca cttcagtatt 720
tcttaactgg tataatccag aaaaaaaaat gataagagct tatgccactg tgatagatgg 780

```
acctgagtac ttttggtgtc agtttgctga tacggagaaa cttcagtgtt tagaagtaga     840
agtacagact gctggagaac aggtagcaga caggagaaat tgtatcccat gtccttatat     900
tggagatcct tgtatagtaa gatacagaga agatggacat tattataggg cacttatcac     960
taatatttgt gaagattatc ttgtatctgt caggcttgtg gactttggaa acattgaaga    1020
ctgtgtggac ccaaaagcac tctgggccat tccttctgaa cttctgtcgg ttcccatgca    1080
agcctttcca tgttgcctct cagggtttaa catttcagaa ggattatgtt ctcaagaggg    1140
aaatgactat ttctatgaaa taataacaga agatgtgttg gaaataacaa tactagaaat    1200
cagaagggat gtttgtgata tccctttagc aattgttgac ttgaaaagca aaggtaaaag    1260
tattaatgag aaaatggaga aatattctaa gactggtatt aaaagtgctc ttccctatga    1320
aaatattgac tcagagataa agcagactct tgggtcctac aatcttgatg taggacttaa    1380
gaaattaagt aataaagctg tacaaaataa aatatatatg gaacaacaga cagatgagct    1440
tgctgaaata actgaaaaag atgtaaacat tattggaacc aaaccaagta acttccgtga    1500
ccctaaaact gataacattt gtgaagggtt tgaaaacccc tgcaaagata aaattgatac    1560
tgaggaactg gaaggtgaat tagagtgcca tctggttgac aaagcagagt ttgatgataa    1620
atacctgatt acaggattta acacattact accacatgct aatgaaacaa aggagatact    1680
agaactgaat tcacttgagg tgccgctttc tcctgatgat gaatcaaaag aattcttaga    1740
actggaatct attgagttac agaattctct ggtggtggat gaagaaaaag gggagctaag    1800
cccggtgcca ccgaatgtgc cactctccca agagtgtgtc acaaaaggcg ccatggagct    1860
atttacactg cagcttcctc tcagctgtga agctgagaaa cagccagaac tagaactacc    1920
tacagcccag ctgcctttag atgacaagat ggatcctttg tctttaggag ttagtcagaa    1980
agcacaggaa tccatgtgta ctgaggacat gagaaagtca agttgtgtag aatcttttga    2040
tgaccagcgc aggatgtcat tgcatctaca tggagcagat tgtgatccta aaacacagaa    2100
tgaaatgaat atatgtgaag aagaatttgt agagtataaa aacagggatg ccatttcggc    2160
attgatgcct ttttctctga ggaagaaagc agtgatggaa gcaagcacaa taatggttta    2220
ccagatcata tttcagntca attacagaac acctacactn tgaaagcctt tactgttgga    2280
tctaaatgtg ttgtgtggtc aagtntaaga aacanatggt ctaaatgtga gattttagaa    2340
acagctgaag aaggnacaag ggttttgaac ctttcaaatg gtatggagga gatagtgaac    2400
cctgagaatg tctggaatgn nanacccaaa ttggataaga gtccacctga gaaaaggggt    2460
ttggaggtga tggagattta accgtggatn tatagctgtg gccaatcagt cagaagctgc    2520
ccntgaacaa gtggcatctt acgcagacca acagagtatt tgagaaaat                2569
```

<210> 579
<211> 752
<212> PRT
<213> Homo Sapiens

<400> 579

```
Arg Val Lys Ala Thr Leu Ser Glu Arg Lys Ile Gly Asp Ser Cys Asp
 1               5                  10                  15
Lys Asp Leu Pro Leu Lys Phe Cys Glu Phe Pro Gln Lys Thr Ile Met
            20                  25                  30
Pro Gly Phe Lys Thr Thr Val Tyr Val Ser His Ile Asn Asp Leu Ser
        35                  40                  45
Asp Phe Tyr Val Gln Leu Ile Glu Asp Glu Ala Glu Ile Ser His Leu
    50                  55                  60
Ser Glu Arg Leu Asn Ser Val Lys Thr Arg Pro Glu Tyr Tyr Val Gly
65                  70                  75                  80
Pro Pro Leu Gln Arg Gly Asp Met Ile Cys Ala Val Phe Pro Glu Asp
                85                  90                  95
Asn Leu Trp Tyr Arg Ala Val Ile Lys Glu Gln Gln Pro Asn Asp Leu
            100                 105                 110
Leu Ser Val Gln Phe Ile Asp Tyr Gly Asn Val Ser Val Val His Thr
        115                 120                 125
Asn Lys Ile Gly Arg Leu Asp Leu Val Asn Ala Ile Leu Pro Gly Leu
    130                 135                 140
```

```
Cys Ile His Cys Ser Leu Gln Gly Phe Glu Val Pro Asp Asn Lys Asn
145                 150                 155                 160
Ser Lys Lys Met Met His Tyr Phe Ser Gln Arg Thr Ser Glu Ala Ala
                165                 170                 175
Ile Arg Cys Glu Phe Val Lys Phe Gln Asp Arg Trp Glu Val Ile Leu
            180                 185                 190
Ala Asp Glu His Gly Ile Ile Ala Asp Asp Met Ile Ser Arg Tyr Ala
        195                 200                 205
Leu Ser Glu Lys Ser Gln Val Glu Leu Ser Thr Gln Val Ile Lys Ser
    210                 215                 220
Ala Ser Ser Lys Ser Val Asn Lys Ser Asp Ile Asp Thr Ser Val Phe
225                 230                 235                 240
Leu Asn Trp Tyr Asn Pro Glu Lys Lys Met Ile Arg Ala Tyr Ala Thr
                245                 250                 255
Val Ile Asp Gly Pro Glu Tyr Phe Trp Cys Gln Phe Ala Asp Thr Glu
            260                 265                 270
Lys Leu Gln Cys Leu Glu Val Glu Val Gln Thr Ala Gly Glu Gln Val
        275                 280                 285
Ala Asp Arg Arg Asn Cys Ile Pro Cys Pro Tyr Ile Gly Asp Pro Cys
    290                 295                 300
Ile Val Arg Tyr Arg Glu Asp Gly His Tyr Tyr Arg Ala Leu Ile Thr
305                 310                 315                 320
Asn Ile Cys Glu Asp Tyr Leu Val Ser Val Arg Leu Val Asp Phe Gly
                325                 330                 335
Asn Ile Glu Asp Cys Val Asp Pro Lys Ala Leu Trp Ala Ile Pro Ser
            340                 345                 350
Glu Leu Leu Ser Val Pro Met Gln Ala Phe Pro Cys Cys Leu Ser Gly
        355                 360                 365
Phe Asn Ile Ser Glu Gly Leu Cys Ser Gln Glu Gly Asn Asp Tyr Phe
    370                 375                 380
Tyr Glu Ile Ile Thr Glu Asp Val Leu Glu Ile Thr Ile Leu Glu Ile
385                 390                 395                 400
Arg Arg Asp Val Cys Asp Ile Pro Leu Ala Ile Val Asp Leu Lys Ser
                405                 410                 415
Lys Gly Lys Ser Ile Asn Glu Lys Met Glu Lys Tyr Ser Lys Thr Gly
            420                 425                 430
Ile Lys Ser Ala Leu Pro Tyr Glu Asn Ile Asp Ser Glu Ile Lys Gln
        435                 440                 445
Thr Leu Gly Ser Tyr Asn Leu Asp Val Gly Leu Lys Lys Leu Ser Asn
    450                 455                 460
Lys Ala Val Gln Asn Lys Ile Tyr Met Glu Gln Gln Thr Asp Glu Leu
465                 470                 475                 480
Ala Glu Ile Thr Glu Lys Asp Val Asn Ile Ile Gly Thr Lys Pro Ser
                485                 490                 495
Asn Phe Arg Asp Pro Lys Thr Asp Asn Ile Cys Glu Gly Phe Glu Asn
            500                 505                 510
Pro Cys Lys Asp Lys Ile Asp Thr Glu Glu Leu Glu Gly Glu Leu Glu
        515                 520                 525
Cys His Leu Val Asp Lys Ala Glu Phe Asp Asp Lys Tyr Leu Ile Thr
    530                 535                 540
Gly Phe Asn Thr Leu Leu Pro His Ala Asn Glu Thr Lys Glu Ile Leu
545                 550                 555                 560
Glu Leu Asn Ser Leu Glu Val Pro Leu Ser Pro Asp Asp Glu Ser Lys
                565                 570                 575
Glu Phe Leu Glu Leu Glu Ser Ile Glu Leu Gln Asn Ser Leu Val Val
```

```
            580                 585                 590
Asp Glu Glu Lys Gly Glu Leu Ser Pro Val Pro Pro Asn Val Pro Leu
        595                 600                 605
Ser Gln Glu Cys Val Thr Lys Gly Ala Met Glu Leu Phe Thr Leu Gln
    610                 615                 620
Leu Pro Leu Ser Cys Glu Ala Glu Lys Gln Pro Glu Leu Glu Leu Pro
625                 630                 635                 640
Thr Ala Gln Leu Pro Leu Asp Asp Lys Met Asp Pro Leu Ser Leu Gly
                645                 650                 655
Val Ser Gln Lys Ala Gln Glu Ser Met Cys Thr Glu Asp Met Arg Lys
            660                 665                 670
Ser Ser Cys Val Glu Ser Phe Asp Asp Gln Arg Arg Met Ser Leu His
        675                 680                 685
Leu His Gly Ala Asp Cys Asp Pro Lys Thr Gln Asn Glu Met Asn Ile
    690                 695                 700
Cys Glu Glu Glu Phe Val Glu Tyr Lys Asn Arg Asp Ala Ile Ser Ala
705                 710                 715                 720
Leu Met Pro Phe Ser Leu Arg Lys Lys Ala Val Met Glu Ala Ser Thr
                725                 730                 735
Ile Met Val Tyr Gln Ile Ile Phe Gln Asn Tyr Arg Thr Pro Thr Leu
            740                 745                 750
```

<210> 580
<211> 2077
<212> DNA
<213> Homo Sapiens

<400> 580

```
ctgttgattt tttggagaaa tatgggagaa acagtggaat atttttatga catttttagg      60
aaatcacctg gcttggttgg tagtcccaca ctgactttcc ttatgataat tctacagatg     120
gaggtgactc gagcagtgat gaggataaag aataacatga aactcctgtg gaagtagaac     180
tcatgactca ggttgaccaa gaggatatca ctcttcagag tggcagagat gaactaaatg     240
aggagctcat tcaggaagaa agctctgaag acgaaggaga atatgaagag gttagaaaag     300
atcaggattc tgttggtgaa atgaaggatg aaggggaaga gacttaaatt atcctgatac     360
taccattgac ttgtctcacc ttcaacccca aaggtccatc cagaaattgg cttcaaaaga     420
ggaatcttct aattctagtg acagtaaatc acagagccgg agacatttgt cagccaagga     480
aagaagggaa atgaaaaaga aaaaacttcc aagtgactca ggagatttag aagcgttaga     540
gggaaaggat aaagaaaaag aaagtactgt acacattgaa actcatcaga acacaagcaa     600
aaatgttgcg gctgtgcagc caatgaaacg aggacaaaag agtaaaatga aaaaaatgaa     660
agaaaaatac aaagaccagg atgaagaaga ccgtgaactt atcatgaagt tgctggggtc     720
tgcaggttca aacaaagaag aaaaagggaa gaaggggaag aaaggaaaaa caaaggacga     780
acctgtgaag aaacagcccc agaaacctag aggtggacag agggtctctg acaacattaa     840
gaaagaaact ccgttccttg aggttataac tcatgagtta caagactttg ctgtagatga     900
tccacatgat gacaaggaag agcaagatct ggatcaacag ggaaatgagg aaaacctatt     960
tgattctttg acaggccagc cacatcctga agatgtacta ctgtttgcca ttccaatatg    1020
tgccccttac accaccatga caaactacaa atataaagtg aaacttactc ctggagtgca    1080
gaaaaaggga aaagctgcaa aaacagcctt gaatagtttc atgcattcca aagaagcaac    1140
agcaagagaa aaagacttat tccgcagcgt aaaggacaca gatttatcaa gaaacattcc    1200
tggcaaagtg aaaagtgtct gcacccaatc ttctgaacgt aaaaaggaaa tagctgaaat    1260
gaaattctaa aatatttgag aagagccaat tttatagcct tttggaagtt caaagatgaa    1320
agcaccatgt atcaggattt ccgcattata aaaatgaact aaacattgcc ttgctatatt    1380
caccaaaagg acttaattct tgtttttttc ccagttttat atagaggaaa cactgtctat    1440
gataggattt ccaaaagtat ttgtggacag ttaaatgcta attatataca tctgtagtta    1500
ttctacattt tcttgaaatt tgggaggtta ataccaagta ttcatttcat gatgtaaaga    1560
aactgaacag tgaagtggct tgattgctta aactattgac ttggtaagtc tactgtatat    1620
```

```
aacatctaat atatatatta caggccaaat gaactaaaca ttgccttgct atattcacca    1680
aaaggactta attcttgttt ttttcccagt tttatataga ggaaacacta tgataggatt    1740
tcctaaagta tttgtggaca gttaaatgct aattatatac atctgtagtt attctacatt    1800
ttcttgaaat ttgagaggtt aataccaagt attcatttca tgatgtaaag aaactgaaca    1860
gtgaagtggc ttgattgctt aaactattga cttggtaagt ctactgtata taacatctaa    1920
tatatatata ttataggcca gctacaaggg gtttaaatat ttaggattgt gtcttgaaaa    1980
ctaagtattg gagtggattt tcttctgctt tcattgatac ttgtcagaaa aaaatattag    2040
accaaaatgt aaaatataag taataattct catgaaa                             2077
```

<210> 581
<211> 312
<212> PRT
<213> Homo Sapiens

<400> 581

```
Arg Gly Arg Asp Leu Asn Tyr Pro Asp Thr Thr Ile Asp Leu Ser His
 1               5                  10                  15
Leu Gln Pro Gln Arg Ser Ile Gln Lys Leu Ala Ser Lys Glu Glu Ser
            20                  25                  30
Ser Asn Ser Ser Asp Ser Lys Ser Gln Ser Arg Arg His Leu Ser Ala
        35                  40                  45
Lys Glu Arg Arg Glu Met Lys Lys Lys Lys Leu Pro Ser Asp Ser Gly
    50                  55                  60
Asp Leu Glu Ala Leu Glu Gly Lys Asp Lys Glu Lys Glu Ser Thr Val
65                  70                  75                  80
His Ile Glu Thr His Gln Asn Thr Ser Lys Asn Val Ala Ala Val Gln
                85                  90                  95
Pro Met Lys Arg Gly Gln Lys Ser Lys Met Lys Lys Met Lys Glu Lys
            100                 105                 110
Tyr Lys Asp Gln Asp Glu Glu Asp Arg Glu Leu Ile Met Lys Leu Leu
        115                 120                 125
Gly Ser Ala Gly Ser Asn Lys Glu Glu Lys Gly Lys Lys Gly Lys Lys
    130                 135                 140
Gly Lys Thr Lys Asp Glu Pro Val Lys Lys Gln Pro Gln Lys Pro Arg
145                 150                 155                 160
Gly Gly Gln Arg Val Ser Asp Asn Ile Lys Lys Glu Thr Pro Phe Leu
                165                 170                 175
Glu Val Ile Thr His Glu Leu Gln Asp Phe Ala Val Asp Asp Pro His
            180                 185                 190
Asp Asp Lys Glu Glu Gln Asp Leu Asp Gln Gln Gly Asn Glu Glu Asn
        195                 200                 205
Leu Phe Asp Ser Leu Thr Gly Gln Pro His Pro Glu Asp Val Leu Leu
    210                 215                 220
Phe Ala Ile Pro Ile Cys Ala Pro Tyr Thr Thr Met Thr Asn Tyr Lys
225                 230                 235                 240
Tyr Lys Val Lys Leu Thr Pro Gly Val Gln Lys Lys Gly Lys Ala Ala
                245                 250                 255
Lys Thr Ala Leu Asn Ser Phe Met His Ser Lys Glu Ala Thr Ala Arg
            260                 265                 270
Glu Lys Asp Leu Phe Arg Ser Val Lys Asp Thr Asp Leu Ser Arg Asn
        275                 280                 285
Ile Pro Gly Lys Val Lys Ser Val Cys Thr Gln Ser Ser Glu Arg Lys
    290                 295                 300
Lys Glu Ile Ala Glu Met Lys Phe
305                 310
```

<210> 582
<211> 3309
<212> DNA
<213> Homo Sapiens

<400> 582

cgcagaccga gacccgaggc ggaggcggac cgcgagccgg ccatgtcggt ggtggggttg 60
gacgtgggct cgcagagctg ctacatcgcg gtagcccggg ccgggggcat cgagaccatc 120
gccaatgagt tcagcgaccg gtgcaccccg tcagtcatat catttggatc aaaaaatага 180
acaatcggag ttgcagccaa aaatcagcaa atcactcatg caaacaatac ggtgtctaac 240
ttcaaaagat ttcatggccg agcattcaat gacccttca ttcaaaagga gaaggaaaac 300
ttgagttacg atttggttcc attgaaaaat ggtggagttg gaataaaggt aatgtacatg 360
ggtgaagaac atctatttag tgtggagcag ataacagcca tgttgttgac taagctgaag 420
gaaactgctg aaaacagcct caagaaacca gtaacagatt gtgttatttc agtcccctcc 480
ttctttacag atgctgagag gcgatctgtg ttagatgctg cacagattgt tggcctaaac 540
tgtttaagac ttatgaatga catgacagct gttgctttga attacggaat ttataagcag 600
gatctcccaa gcctggatga gaaacctcgg atagtggttt ttgttgatat gggacattca 660
gcttttcaag tgtctgcttg tgcttttaac aagggaaaat tgaaggtact gggaacagct 720
tttgatcctt tcttaggagg aaaaaacttc gatgaaaagt tagtggaaca tttttgtgca 780
gaatttaaaa ctaagtacaa gttggatgca aaatccaaaa tacgagcact cctacgtctg 840
tatcaggaat gtgaaaaact gaaaaagcta atgagctcta acagcacaga ccttccactg 900
aatatcgaat gctttatgaa tgataaagat gtttccggaa agatgaacag gtcacaattt 960
gaagaactct gtgctgaact tctgcaaaag atagaagtac ccctttattc actgttggaa 1020
caaactcatc tcaaagtaga agatgtgagt gcagttgaga ttgttggagg cgctacacga 1080
attccagctg tgaaggaaag aattgccaaa ttctttggaa aagatattag cacaacactc 1140
aatgcagatg aagcagtagc cagaggatgt gcattacagt gtgcaatact ttccccggca 1200
tttaaagtta gagaattttc cgtcacagat gcagttcctt ttccaatatc tctgatctgg 1260
aaccatgatt cagaagatac tgaaggtgtt catgaagtct ttagtcgaaa ccatgctgct 1320
cctttctcca aagttctcac ctttctgaga agggggcctt ttgagctaga agctttctat 1380
tctgatcccc aaggagttcc atatccagaa gcaaaaatag gccgctttgt agttcagaat 1440
gtttctgcac agaaagatgg agaaaaatct agagtaaaag tcaaagtgcg agtcaacacc 1500
catggcattt tcaccatctc tacggcatct atggtggaga aagtcccaac tgaggagaat 1560
gaaatgtctt ctgaagctga catggagtgt ctgaatcaga gaccaccaga aaacccagac 1620
actgataaaa atgtccagca agacaacagt gaagctggaa cacagcccca ggtacaaact 1680
gatgctcaac aaacctcaca gtctcccct tcacctgaac ttacctcaga agaaaacaaa 1740
atcccagatg ctgacaaagc aaatgaaaaa aaagttgacc agcctccaga agctaaaaag 1800
cccaaaataa aggtggtgaa tgttgagctg cctattgaag ccaacttggt ctggcagtta 1860
gggaaagacc ttcttaacat gtatattgag acagagggta agatgataat gcaagataaa 1920
ttggaaaaag aaaggaatga tgctaaaaat gcagttgagg aatatgtgta tgagttcaga 1980
gacaagctgt gtggaccata tgaaaaattt atatgtgagc aggatcatca aaatttttg 2040
agactcctca cagaaactga agactggctg tatgaagaag gagaggacca agctaaacaa 2100
gcatatgttg acaagttgga agaattaatg aaaattggca ctccagttaa agttcggttt 2160
caggaagctg aagaacggcc aaaaatgttt gaagaactag gacagaggct gcagcattat 2220
gccaagatag cagctgactt cagaaataag gatgagaaat acaaccatat tgatgagtct 2280
gaaatgaaaa aagtggagaa gtctgttaat gaagtgatgg aatggatgaa taatgtcatg 2340
aatgctcagg ctaaaaagag tcttgatcag gatccagttg tacgtgctca ggaaattaaa 2400
acaaaaatca aggaattgaa caacacatgt gaacccgttg taacacaacc gaaaccaaaa 2460
attgaatcac ccaaactgga aagaactcca aatggcccaa atattgataa aaaggaagaa 2520
gatttagaag acaaaaacaa ttttggtgct gaacctccac atcagaatgg tgaatgttac 2580
cctaatgaga aaaattctgt taatatggac ttggactaga taaccttaaa ttggcctatt 2640
ccttcaatta ataaaatatt tttgccatag tatgtgactc tacataacat actgaaacta 2700
tttatatttt ctttttaag gatatttaga aattttgtgt attatatgga aaaagaaaaa 2760
aagcttaagt ctgtagtctt tatgatccta aaagggaaaa ttgccttggt aactttcaga 2820
ttcctgtgga attgtgaatt catactaagc tttctgtgca gtctcaccat ttgcatcact 2880
gaggatgaaa ctgacttttg tcttttggag aaaaaaaact gtactgcttg ttcaagaggg 2940

```
ctgtgattaa aatctttaag catttgttcc tgccaaggta gttttcttgc attttgctct    3000
ccattcagca tgtgtgtggg tgtggatgtt tataaacaag actaagtctg acttcataag    3060
ggctttctaa aaccatttct gtccaagaga aaatgacttt ttgctttgat attaaaaatt    3120
caatgagtaa aacaaaagct agtcaaatgt gttagcagca tgcagaacaa aaactttaaa    3180
ctttctctct cactatacag tatattgtca tgtgaaagtg tggaatggaa gaaatgtcga    3240
tcctgttgta actgattgtg aacactttta tgagctttaa aataaagttc atcttatggt    3300
gtcatttct                                                           3309
```

<210> 583
<211> 872
<212> PRT
<213> Homo Sapiens

<400> 583

```
Arg Arg Pro Arg Pro Glu Ala Glu Ala Asp Arg Glu Pro Ala Met Ser
 1               5                  10                  15
Val Val Gly Leu Asp Val Gly Ser Gln Ser Cys Tyr Ile Ala Val Ala
            20                  25                  30
Arg Ala Gly Gly Ile Glu Thr Ile Ala Asn Glu Phe Ser Asp Arg Cys
        35                  40                  45
Thr Pro Ser Val Ile Ser Phe Gly Ser Lys Asn Arg Thr Ile Gly Val
    50                  55                  60
Ala Ala Lys Asn Gln Gln Ile Thr His Ala Asn Asn Thr Val Ser Asn
65                  70                  75                  80
Phe Lys Arg Phe His Gly Arg Ala Phe Asn Asp Pro Phe Ile Gln Lys
                85                  90                  95
Glu Lys Glu Asn Leu Ser Tyr Asp Leu Val Pro Leu Lys Asn Gly Gly
            100                 105                 110
Val Gly Ile Lys Val Met Tyr Met Gly Glu Glu His Leu Phe Ser Val
        115                 120                 125
Glu Gln Ile Thr Ala Met Leu Leu Thr Lys Leu Lys Glu Thr Ala Glu
    130                 135                 140
Asn Ser Leu Lys Lys Pro Val Thr Asp Cys Val Ile Ser Val Pro Ser
145                 150                 155                 160
Phe Phe Thr Asp Ala Glu Arg Arg Ser Val Leu Asp Ala Ala Gln Ile
                165                 170                 175
Val Gly Leu Asn Cys Leu Arg Leu Met Asn Asp Met Thr Ala Val Ala
            180                 185                 190
Leu Asn Tyr Gly Ile Tyr Lys Gln Asp Leu Pro Ser Leu Asp Glu Lys
        195                 200                 205
Pro Arg Ile Val Val Phe Val Asp Met Gly His Ser Ala Phe Gln Val
    210                 215                 220
Ser Ala Cys Ala Phe Asn Lys Gly Lys Leu Lys Val Leu Gly Thr Ala
225                 230                 235                 240
Phe Asp Pro Phe Leu Gly Gly Lys Asn Phe Asp Glu Lys Leu Val Glu
                245                 250                 255
His Phe Cys Ala Glu Phe Lys Thr Lys Tyr Lys Leu Asp Ala Lys Ser
            260                 265                 270
Lys Ile Arg Ala Leu Leu Arg Leu Tyr Gln Glu Cys Glu Lys Leu Lys
        275                 280                 285
Lys Leu Met Ser Ser Asn Ser Thr Asp Leu Pro Leu Asn Ile Glu Cys
    290                 295                 300
Phe Met Asn Asp Lys Asp Val Ser Gly Lys Met Asn Arg Ser Gln Phe
305                 310                 315                 320
Glu Glu Leu Cys Ala Glu Leu Leu Gln Lys Ile Glu Val Pro Leu Tyr
```

```
                325                 330                 335
Ser Leu Leu Glu Gln Thr His Leu Lys Val Glu Asp Val Ser Ala Val
            340                 345                 350
Glu Ile Val Gly Gly Ala Thr Arg Ile Pro Ala Val Lys Glu Arg Ile
        355                 360                 365
Ala Lys Phe Phe Gly Lys Asp Ile Ser Thr Thr Leu Asn Ala Asp Glu
    370                 375                 380
Ala Val Ala Arg Gly Cys Ala Leu Gln Cys Ala Ile Leu Ser Pro Ala
385                 390                 395                 400
Phe Lys Val Arg Glu Phe Ser Val Thr Asp Ala Val Pro Phe Pro Ile
                405                 410                 415
Ser Leu Ile Trp Asn His Asp Ser Glu Asp Thr Glu Gly Val His Glu
            420                 425                 430
Val Phe Ser Arg Asn His Ala Ala Pro Phe Ser Lys Val Leu Thr Phe
        435                 440                 445
Leu Arg Arg Gly Pro Phe Glu Leu Glu Ala Phe Tyr Ser Asp Pro Gln
    450                 455                 460
Gly Val Pro Tyr Pro Glu Ala Lys Ile Gly Arg Phe Val Val Gln Asn
465                 470                 475                 480
Val Ser Ala Gln Lys Asp Gly Glu Lys Ser Arg Val Lys Val Lys Val
                485                 490                 495
Arg Val Asn Thr His Gly Ile Phe Thr Ile Ser Thr Ala Ser Met Val
            500                 505                 510
Glu Lys Val Pro Thr Glu Glu Asn Glu Met Ser Ser Glu Ala Asp Met
        515                 520                 525
Glu Cys Leu Asn Gln Arg Pro Pro Glu Asn Pro Asp Thr Asp Lys Asn
    530                 535                 540
Val Gln Gln Asp Asn Ser Glu Ala Gly Thr Gln Pro Gln Val Gln Thr
545                 550                 555                 560
Asp Ala Gln Gln Thr Ser Gln Ser Pro Pro Ser Pro Glu Leu Thr Ser
                565                 570                 575
Glu Glu Asn Lys Ile Pro Asp Ala Asp Lys Ala Asn Glu Lys Lys Val
            580                 585                 590
Asp Gln Pro Pro Glu Ala Lys Lys Pro Lys Ile Lys Val Val Asn Val
        595                 600                 605
Glu Leu Pro Ile Glu Ala Asn Leu Val Trp Gln Leu Gly Lys Asp Leu
    610                 615                 620
Leu Asn Met Tyr Ile Glu Thr Glu Gly Lys Met Ile Met Gln Asp Lys
625                 630                 635                 640
Leu Glu Lys Glu Arg Asn Asp Ala Lys Asn Ala Val Glu Glu Tyr Val
                645                 650                 655
Tyr Glu Phe Arg Asp Lys Leu Cys Gly Pro Tyr Glu Lys Phe Ile Cys
            660                 665                 670
Glu Gln Asp His Gln Asn Phe Leu Arg Leu Leu Thr Glu Thr Glu Asp
        675                 680                 685
Trp Leu Tyr Glu Glu Gly Glu Asp Gln Ala Lys Gln Ala Tyr Val Asp
    690                 695                 700
Lys Leu Glu Glu Leu Met Lys Ile Gly Thr Pro Val Lys Val Arg Phe
705                 710                 715                 720
Gln Glu Ala Glu Glu Arg Pro Lys Met Phe Glu Glu Leu Gly Gln Arg
                725                 730                 735
Leu Gln His Tyr Ala Lys Ile Ala Ala Asp Phe Arg Asn Lys Asp Glu
            740                 745                 750
Lys Tyr Asn His Ile Asp Glu Ser Glu Met Lys Lys Val Glu Lys Ser
        755                 760                 765
```

```
Val Asn Glu Val Met Glu Trp Met Asn Asn Val Met Asn Ala Gln Ala
    770                 775                 780
Lys Lys Ser Leu Asp Gln Asp Pro Val Val Arg Ala Gln Glu Ile Lys
785                 790                 795                 800
Thr Lys Ile Lys Glu Leu Asn Asn Thr Cys Glu Pro Val Val Thr Gln
                805                 810                 815
Pro Lys Pro Lys Ile Glu Ser Pro Lys Leu Glu Arg Thr Pro Asn Gly
            820                 825                 830
Pro Asn Ile Asp Lys Lys Glu Glu Asp Leu Glu Asp Lys Asn Asn Phe
        835                 840                 845
Gly Ala Glu Pro Pro His Gln Asn Gly Glu Cys Tyr Pro Asn Glu Lys
    850                 855                 860
Asn Ser Val Asn Met Asp Leu Asp
865                 870
```

<210> 584
<211> 2918
<212> DNA
<213> Homo Sapiens

<400> 584

```
ataactggag ctcgcgcgcc tgcaggtcga cactagtgga tccaaagaat tcggcacgag      60
gtgacgacaa cagggacaag gactccgaga agaccaagag gtggtccaag cccaggaagc     120
gctccctgat ggagatggag gggaaggagg atgcccttta aggtgctgaa gtgcatgtac     180
tgtggacact cctttgagtc cttgcaggac ctcagcgtcc acatgatcaa aaccaagcat     240
taccagaaag tgcctctgaa ggagccagtg ccagccatca ccaaactggt cccctccacc     300
aaaaagcggg cgcttcagga cctggcgccc ccctgctccc ctgagccagc aggaatggcc     360
gcagaggtgg ccctgagtga gtcagccaag gatcagaaag cagcgaaccc gtacgtcacg     420
cccaataacc gctatggcta ccagaatggc gccagctaca cctggcagtt tgaggcccgc     480
aaggcgcaga tcctcaagtg catggagtgt ggcagctccc acgacacgct gcagcagctc     540
accgcccaca tgatggtcac cgggcacttc ctgaaagtga ccacctcggc ttctaagaag     600
ggcaagcagt tggtgctgga ccctgtggtg gaagagaaga tccagtccat cccactaccg     660
cccaccaccc acacgcggct gccggcctcc agcatcaaaa agcagcccga ctctcccgcg     720
gggtccacga cttctgaaga aaagaaagag ccagagaagg agaagccgcc tgtggctggc     780
gacgcggaga agatcaagga ggagagtgag gacagcttgg agaaatttga gcccagcacc     840
ctgtacccgt acctgcgtga ggaggacctg gacgacagcc ccaagggagg gctggacatt     900
ctcaagtccc tggagaatac cgtctccacg gccattagca aagctcagaa tggtgcgccc     960
tcatggggtg gctaccccag catccatgca gcctaccagc tcccgggcac cgtgaagcca    1020
ctgccggcgg ccgtgcagag cgtgcaggtg cagccgtcct atgctggcgg cgtgaagtcg    1080
ctgtcttccg ccgagcacaa cgccctcctg cactccccag ggagcctcac gcccccaccg    1140
cacaagagca acgtgtctgc catggaggag ctggtggaga aggtcacggg caaggtcaac    1200
atcaagaagg aggagagacc ccctgagaag gagaagagct ccctggccaa ggctgcgtcc    1260
cccatagcaa aagagaataa agatttcccg aaaacggagg aagtcagcgg caaaccacag    1320
aagaagggcc ctgaggccga gacttgggaa gccaaaaagg agggaccgct ggacgttcac    1380
accccaaatg gcacagagcc tctcaaagca aaggtcacca acggctgtaa caacctgggg    1440
atcatcatgg accactcacc ggagccttcc ttcatcaacc cgctgagcgc tttgcagtcc    1500
atcatgaaca cccacctggg caaggtgtcc aagcccgtga gtccctcgct ggacccgctg    1560
gcgatgctgt acaagatcag caacagcatg ctggacaagc cggtgtaccc cgccaccccc    1620
gtgaagcagg ccgatgccat cgaccgctac tattatgaaa acagcgacca gcccattgac    1680
ttaaccaagt ccaagaacaa gccgctggtg tccagcgtgg ctgattcggt ggcatcacct    1740
ctgcgggaga gcgcactcat ggacatctcc gacatggtga aaaacctcac aggccgcctg    1800
acgcccaagt cctccacgcc ctccacagtt tcagagaagt ccgatgctga tggcagcagc    1860
tttgaggagg cgttggacga gctgtcaccg gtccacaaga ggaagggccg gcagtccaac    1920
tggaacccgc agcaccttct catcctgcag gcccagttcg cctcgagctt gcgggagacc    1980
acagaaggca agtacatcat gtcggacttg ggcccgcagg agagggtgca catctcgaag    2040
```

```
tttactgggc tctccatgac caccatcagc cactggctgg ccaatgtgaa gtaccagttg    2100
aggaggacag ggggaacgaa attcctaaag aacctggaca cagggcatcc tgttttcttt    2160
tgcaacgatt gtgcctctca gttcagaact gcttctacat acataagtca tttggagaca    2220
cacttgggct tcagcctgaa ggatctctcc aagctgccac tcaatcagat tcaagaacag    2280
cagaatgttt cgaaagtcct caccaacaaa actctgggcc cactgggggc caccgaggaa    2340
gacttgggct ccacattcca atgtaagctc tgcaaccgga cttttgcgaa gcaagcacgc    2400
agtcaaactg caccttagta agacccacgg caagtctccc gaggaccacc tgatctatgt    2460
gactgagttg gagaaacagt agcgtccagg tatgcaagag accgcggaac attgcactaa    2520
acgtcgtcga gctgcactag gcatggcctg agcctctgaa atcagtcttt cctttgttgc    2580
tggcccgcct ctctggacct tggttttcct acacatattt tgtatattta tatgctttct    2640
gtccgatctg tgcatgttat ttttcttttt ccgtgagtca aagtctgacc tttattttca    2700
acatctgttt ttggtgttaa gctatctttt gtaggaaata gtggggcaca ctactcagag    2760
acattattta gcagtaaaga aagacacaaa taacaatgat aaaaagacat cctaaaatgg    2820
tgaagttgcc atgacaataa aggtcataga acctggtagt gtcaaattta acccttgag     2880
gactgtaatt gcatttctgt gcctttcact tgaaaaaa                            2918
```

<210> 585
<211> 687
<212> PRT
<213> Homo Sapiens

<400> 585

```
Met Ala Ala Glu Val Ala Leu Ser Glu Ser Ala Lys Asp Gln Lys Ala
 1               5                  10                  15
Ala Asn Pro Tyr Val Thr Pro Asn Asn Arg Tyr Gly Tyr Gln Asn Gly
            20                  25                  30
Ala Ser Tyr Thr Trp Gln Phe Glu Ala Arg Lys Ala Gln Ile Leu Lys
        35                  40                  45
Cys Met Glu Cys Gly Ser Ser His Asp Thr Leu Gln Gln Leu Thr Ala
    50                  55                  60
His Met Met Val Thr Gly His Phe Leu Lys Val Thr Thr Ser Ala Ser
65                  70                  75                  80
Lys Lys Gly Lys Gln Leu Val Leu Asp Pro Val Val Glu Glu Lys Ile
                85                  90                  95
Gln Ser Ile Pro Leu Pro Pro Thr Thr His Thr Arg Leu Pro Ala Ser
            100                 105                 110
Ser Ile Lys Lys Gln Pro Asp Ser Pro Ala Gly Ser Thr Thr Ser Glu
        115                 120                 125
Glu Lys Lys Glu Pro Glu Lys Glu Lys Pro Pro Val Ala Gly Asp Ala
    130                 135                 140
Glu Lys Ile Lys Glu Glu Ser Glu Asp Ser Leu Glu Lys Phe Glu Pro
145                 150                 155                 160
Ser Thr Leu Tyr Pro Tyr Leu Arg Glu Glu Asp Leu Asp Asp Ser Pro
                165                 170                 175
Lys Gly Gly Leu Asp Ile Leu Lys Ser Leu Glu Asn Thr Val Ser Thr
            180                 185                 190
Ala Ile Ser Lys Ala Gln Asn Gly Ala Pro Ser Trp Gly Gly Tyr Pro
        195                 200                 205
Ser Ile His Ala Ala Tyr Gln Leu Pro Gly Thr Val Lys Pro Leu Pro
    210                 215                 220
Ala Ala Val Gln Ser Val Gln Val Gln Pro Ser Tyr Ala Gly Gly Val
225                 230                 235                 240
Lys Ser Leu Ser Ser Ala Glu His Asn Ala Leu Leu His Ser Pro Gly
                245                 250                 255
Ser Leu Thr Pro Pro Pro His Lys Ser Asn Val Ser Ala Met Glu Glu
```

```
            260                 265                 270
Leu Val Glu Lys Val Thr Gly Lys Val Asn Ile Lys Lys Glu Glu Arg
        275                 280                 285
Pro Pro Glu Lys Glu Lys Ser Ser Leu Ala Lys Ala Ala Ser Pro Ile
    290                 295                 300
Ala Lys Glu Asn Lys Asp Phe Pro Lys Thr Glu Glu Val Ser Gly Lys
305                 310                 315                 320
Pro Gln Lys Lys Gly Pro Glu Ala Glu Thr Trp Glu Ala Lys Lys Glu
                325                 330                 335
Gly Pro Leu Asp Val His Thr Pro Asn Gly Thr Glu Pro Leu Lys Ala
            340                 345                 350
Lys Val Thr Asn Gly Cys Asn Asn Leu Gly Ile Ile Met Asp His Ser
        355                 360                 365
Pro Glu Pro Ser Phe Ile Asn Pro Leu Ser Ala Leu Gln Ser Ile Met
    370                 375                 380
Asn Thr His Leu Gly Lys Val Ser Lys Pro Val Ser Pro Ser Leu Asp
385                 390                 395                 400
Pro Leu Ala Met Leu Tyr Lys Ile Ser Asn Ser Met Leu Asp Lys Pro
                405                 410                 415
Val Tyr Pro Ala Thr Pro Val Lys Gln Ala Asp Ala Ile Asp Arg Tyr
            420                 425                 430
Tyr Tyr Glu Asn Ser Asp Gln Pro Ile Asp Leu Thr Lys Ser Lys Asn
        435                 440                 445
Lys Pro Leu Val Ser Ser Val Ala Asp Ser Val Ala Ser Pro Leu Arg
    450                 455                 460
Glu Ser Ala Leu Met Asp Ile Ser Asp Met Val Lys Asn Leu Thr Gly
465                 470                 475                 480
Arg Leu Thr Pro Lys Ser Ser Thr Pro Ser Thr Val Ser Glu Lys Ser
                485                 490                 495
Asp Ala Asp Gly Ser Ser Phe Glu Glu Ala Leu Asp Glu Leu Ser Pro
            500                 505                 510
Val His Lys Arg Lys Gly Arg Gln Ser Asn Trp Asn Pro Gln His Leu
        515                 520                 525
Leu Ile Leu Gln Ala Gln Phe Ala Ser Ser Leu Arg Glu Thr Thr Glu
    530                 535                 540
Gly Lys Tyr Ile Met Ser Asp Leu Gly Pro Gln Glu Arg Val His Ile
545                 550                 555                 560
Ser Lys Phe Thr Gly Leu Ser Met Thr Thr Ile Ser His Trp Leu Ala
                565                 570                 575
Asn Val Lys Tyr Gln Leu Arg Arg Thr Gly Gly Thr Lys Phe Leu Lys
            580                 585                 590
Asn Leu Asp Thr Gly His Pro Val Phe Phe Cys Asn Asp Cys Ala Ser
        595                 600                 605
Gln Phe Arg Thr Ala Ser Thr Tyr Ile Ser His Leu Glu Thr His Leu
    610                 615                 620
Gly Phe Ser Leu Lys Asp Leu Ser Lys Leu Pro Leu Asn Gln Ile Gln
625                 630                 635                 640
Glu Gln Gln Asn Val Ser Lys Val Leu Thr Asn Lys Thr Leu Gly Pro
                645                 650                 655
Leu Gly Ala Thr Glu Glu Asp Leu Gly Ser Thr Phe Gln Cys Lys Leu
            660                 665                 670
Cys Asn Arg Thr Phe Ala Lys Gln Ala Arg Ser Gln Thr Ala Pro
        675                 680                 685
```

<210> 586

<211> 1898
<212> DNA
<213> Homo Sapiens

<400> 586

```
ccgccttggg tcagcctgct cccctgcttc ctgccgcagt gggggccgtc agcctggcca      60
cctcccagct cccaagccca cccctggggc ccaccgtccc cccacagcca ccctcggccc     120
tggagtcgga tggggaaggg ccgcccccca gggtgggctt tgtggacagc accatcaaga     180
gcctggacga naagctgcgg actctgctct accaggagca cgtgcccacc tcctcagcct     240
cagctgggac ccctgtggag gtgggcgaca ganacttcac cctggagccc ctgagagggg     300
accagccccg ctcanaggtc tgcgggggggg acctggccct gcccccagtg cctaaggagg     360
cggtctcagg gcgtgtccag ctgccccagc ccttggtgga gaagtcagaa ctggccccca     420
ctcgaggggc cgtgatggag cagggcacgt cctcgtcaat gacagagtcg tctcccagga     480
gtatgctagg ctatgacaga gatggaaggc aggtggcctc agactcccat gtggtcccca     540
gcgtccccca ggatgtacct gcttttgtga gacctgcacg tgtgganccc acanacaggg     600
atggtggana agctgganaa agctcggcan agcccccgcc gagtgacatg ggcanngtgg     660
ggggccaggc tagccacccc cagacactcg gcnctcgagc tttggggtcc cctcggaanc     720
gtccagatca ccaggatgtc agctcaccag ccaagactgt gggccgtttc tcggtggtca     780
gcactcagga cgagtggacc ctggcctccc cccacagcct gagatactct gccccacccg     840
acgtctacct ggacgaggcc ccctccagcc ccgacgtgaa gctggcagtg cggcgggcgc     900
agacggcctc ctccatcgag gtcggcgtgg gcgagcccgt gtccagcgac tctggggacg     960
agggccctcg ggcgagaccc ccggtgcaga agcaggcgtc cctgcccgtg agtggcagcg    1020
tggctggcga cttcgtgaag aaggccaccg cttcctgcag aggccttctc gggccggctt    1080
cgctgggccc cgagacaccc agcagggtgg gcatgaaggt ccccacgatc agcgtgacct    1140
ccttccattc ccagtcgtcc tacatcagca gcgacaatga ttcggagctc gaggatgctg    1200
acataaagaa ggagctgcan agtctgcggg agaagcacct gaaggagatc tcggagctgc    1260
agagccagca gaagcaggag atcgaagctc tgtnccgccg cctgggcaag ccactgcccc    1320
ccaacgtggg cttcttccac acggcacccc ccactggccg ccgganaaaa accancaaga    1380
ncaagctgaa ngcaggcaag ctgctaaatc ccctggtgcg gcagctcaag gtcgtggcct    1440
ccaacacagg tcacttggct gactccanca naagccctcc cgctaangac ctgcccnagc    1500
cagtgtgggg ctcactgcan acaacacggg cctgaacggg aangcagtgc anaccancan    1560
ccctgctccg tccggggctc cctgtcttcn gacatctgct ccggcttacc antgatggaa    1620
gcggaacgcg tngncaangg tcctccacca acaacctggc ccaggcctga accaagcccc    1680
acccgccctg cacgtccaag cgcangtgaa caacancaac nacaagaaag gttcttcncc    1740
gacgaactgc acaanctggt ggacnaatgg acaacaanan ngtggggggc gcgcactgaa    1800
acccacnctc naccccctnaa ncnnaaccnc aacttccana cattgaggcc cgcaggtggg    1860
ctgccctggc naagcccggc tttnaccccc ctccaaca                             1898
```

<210> 587
<211> 399
<212> PRT
<213> Homo Sapiens

<400> 587

```
Ala Leu Gly Gln Pro Ala Pro Leu Leu Pro Ala Ala Val Gly Ala Val
 1               5                  10                  15
Ser Leu Ala Thr Ser Gln Leu Pro Ser Pro Pro Leu Gly Pro Thr Val
            20                  25                  30
Pro Pro Gln Pro Pro Ser Ala Leu Glu Ser Asp Gly Glu Gly Pro Pro
        35                  40                  45
Pro Arg Val Gly Phe Val Asp Ser Thr Ile Lys Ser Leu Asp Lys Leu
    50                  55                  60
Arg Thr Leu Leu Tyr Gln Glu His Val Pro Thr Ser Ser Ala Ser Ala
65                  70                  75                  80
Gly Thr Pro Val Glu Val Gly Asp Arg Phe Thr Leu Glu Pro Leu Arg
```

```
                85                  90                  95
Gly Asp Gln Pro Arg Ser Val Cys Gly Gly Asp Leu Ala Leu Pro Pro
            100                 105                 110
Val Pro Lys Glu Ala Val Ser Gly Arg Val Gln Leu Pro Gln Pro Leu
        115                 120                 125
Val Glu Lys Ser Glu Leu Ala Pro Thr Arg Gly Ala Val Met Glu Gln
    130                 135                 140
Gly Thr Ser Ser Ser Met Thr Glu Ser Ser Pro Arg Ser Met Leu Gly
145                 150                 155                 160
Tyr Asp Arg Asp Gly Arg Gln Val Ala Ser Asp Ser His Val Val Pro
                165                 170                 175
Ser Val Pro Gln Asp Val Pro Ala Phe Val Arg Pro Ala Arg Val Pro
            180                 185                 190
Thr Arg Asp Gly Gly Ala Gly Ser Ser Ala Pro Pro Pro Ser Asp Met
        195                 200                 205
Gly Val Gly Gly Gln Ala Ser His Pro Gln Thr Leu Gly Arg Ala Leu
    210                 215                 220
Gly Ser Pro Arg Arg Pro Asp His Gln Asp Val Ser Ser Pro Ala Lys
225                 230                 235                 240
Thr Val Gly Arg Phe Ser Val Val Ser Thr Gln Asp Glu Trp Thr Leu
                245                 250                 255
Ala Ser Pro His Ser Leu Arg Tyr Ser Ala Pro Pro Asp Val Tyr Leu
            260                 265                 270
Asp Glu Ala Pro Ser Ser Pro Asp Val Lys Leu Ala Val Arg Arg Ala
        275                 280                 285
Gln Thr Ala Ser Ser Ile Glu Val Gly Val Gly Glu Pro Val Ser Ser
    290                 295                 300
Asp Ser Gly Asp Glu Gly Pro Arg Ala Arg Pro Pro Val Gln Lys Gln
305                 310                 315                 320
Ala Ser Leu Pro Val Ser Gly Ser Val Ala Gly Asp Phe Val Lys Lys
                325                 330                 335
Ala Thr Ala Ser Cys Arg Gly Leu Leu Gly Pro Ala Ser Leu Gly Pro
            340                 345                 350
Glu Thr Pro Ser Arg Val Gly Met Lys Val Pro Thr Ile Ser Val Thr
        355                 360                 365
Ser Phe His Ser Gln Ser Ser Tyr Ile Ser Ser Asp Asn Asp Ser Glu
    370                 375                 380
Leu Glu Asp Ala Asp Ile Lys Lys Glu Leu Ser Leu Arg Glu Lys
385                 390                 395
```

<210> 588
<211> 707
<212> DNA
<213> Homo Sapiens

<400> 588

```
agatggcgcc tgttgtgaca gggaaatttg gtgagcggcc tccacctaaa cgacttacta      60
gggaagctat gcgaaattat ttaaaagagc gaggggatca aacagtnctt attcttcatg     120
caaaagttgc acagaagtca tatggaaatg aaanaaggtt tttttgccca cctccttgtg     180
tatatcttat gggcantgga tggaagaaaa aaaangaaca aatggaacgc gatggttgtt     240
ctgaacaaaa gtctcaaccg tgtgcattta ttgggatagg aaatagtgac caaaaaatgc     300
agcagctana cttggaagga aagaactatt gcacagccaa aacattgtat atatctgact     360
cagacaagcg aaagcacttc atgttgtctg taaagatgtt ctatggcaac agtgatgaca     420
ttggtgtgtt cctcagcaag cgaataaaag tcntctccaa accttccaaa aagaacagtc     480
attgaaaaat gctgacttat gcattgcctc angaacaaag gtggctctgt ttaatcgact     540
```

acnatcccan acagttagta ccagatactt gcatgttana aggaggtnat tttcatgcca 600
gttcacagcn gtggggagcc ttttttattc anctcttgga tgatgatgan tccnaaggag 660
aagaattcac ngtccgagat ggctacatcc attatggaca aacagtc 707

<210> 589
<211> 551
<212> DNA
<213> Homo Sapiens

<400> 589
actgtggctt ctgcatttca aatcagcact tgcagggaga caacggggtt tttgaatagt 60
atcacctggt atgaaaagtt ttcccaagaa accacaaacg attgttcatt ttttctcctt 120
ttttgttaac tttttgccac actcaagtca gtttaagtcc tagcaaaaag acggtagtta 180
ggataccact gtggctgtan atgatgtgac actggttgaa tttgtgctgg cgtttgtgta 240
acttccctcg ctgtttgtgt ttgattcgtt agggggcacc tggcttgaat tggctcgaag 300
gattgctcct gctgcactgc aatgtggccg cggccctggt tctggtgtgt angtaaaggt 360
aaggctggtg gaataaatga ttccaccatt tcggaccaaa gttactggaa cctggactgg 420
ttgccggacc catctccaac cttctcggaa tgcanaaatg tctgggacga cacagaacat 480
acctctccac acctgtacat aatttcagct tctacatccc caaaccacac tcgtaaattt 540
ggantnaaaa t 551

<210> 590
<211> 478
<212> DNA
<213> Homo Sapiens

<400> 590
actgtggctt ctgcatttca aatcagcact tgcagggana caacggggtt tttgaatagt 60
atcacctggt atgaaaagtt ttcccaagaa accacaaacn attgttcatt ttttctcctt 120
ttttgttaac ttttngccac actcaantca gtttaagtcc tagcaaaaan acggtagtta 180
ggataccact gtggctgtaa atgatntgac actggttgaa tttgtgctgg cgtttgtgta 240
acttccctcg ctgtttgtgt ttgattcgtn agggggcacc tggcttgaat tggctcgaag 300
gattgctcct gctgcactgc aatgtggccg cgggcctgnt tcttatntgt tgtaaangtn 360
aggntggtgg aataaatgat tccatcatnt cggancgaag ttgctgggaa ctggganngg 420
tngncggaac catctccgac cncccggaaa ngcagaagtg ttngtggnag accggaac 478

<210> 591
<211> 707
<212> DNA
<213> Homo Sapiens

<400> 591
actgtggctt ctgcatttca aatcagcact tgcagggaga caacggggtt tttgaatagt 60
atcacctggt atgaaaagtt ttcccaanaa accacaaacg attgttcatt ttttctcctt 120
ttttgttaac tttttgccac actcaantca gtttaantcc tancaaaaag acggtagtta 180
ggataccact gtggctgtaa atgatgtgac actggttgaa tttgtgctgg cgtttgtgta 240
acttccctcg ctgtttgtgt ttgattcgtt agggggcacc tggcttgaat tggctcgaag 300
gattgctcct gctgcactgc aatgtggccg cggccctggt tctggtgtgt aggtaaaggt 360
aaggctggtg gaataaatga ttccatcatt tcggaccaaa gttactggaa cctggactgg 420
ttgccggacc catctccaac cttctcggaa tgcagaaatg tctgggacga cacagancat 480
actctctcca cacctgtaca tagtttcngc ttctacatcc ccaaaccaca ctcgtaaatt 540
tggantgaaa ttctgtcctg taagttcaag cattnctacg tccccacccg ccatttcaac 600
tgaaaggctc tctaccacan ggnacaggaa atgactgggg caaggacagg gcccattccc 660
tcattaaatg tnatactccg ccttatcngt cctaaangaa tgtncaa 707

<210> 592
<211> 541
<212> DNA
<213> Homo Sapiens

<400> 592
ggtaaacttt tggccacncn caattcantt taattcctac caaaaaaacg gtatttagna 60
tnccnctgtg gctgtaaata atttaacnct ggttaaattn ntnctggctt tngtntanct 120
cccccccctn ttngtttttn atccnttagg gggcacctgn cttnantngg cncaaaggat 180
ngcccctgct gcantgcaat ttggccncgg ccctggtcct ggtttntagg taaaggtaag 240
gcnggtgnaa taantaatcc caccattncg naccaaattt actgnaacct gaacnggttg 300
ccgnacccan cnccancctn cncgaaatgc aaaantttct ggnacaacnc aaaccntacn 360
cncnccaccc ctntncntat ttncagctnc tacntcccca aaccacacnc ntaaattngn 420
attaaaatcc tntcctgtaa ttccaagcat ggctacttcc ccaccgccat tcaactnaag 480
gcccnctacc acaggcncag nattaantgg ggcaaggaaa gggcccatcc ccccataaaa 540
t 541

<210> 593
<211> 605
<212> DNA
<213> Homo Sapiens

<400> 593
actgtggctt ctgcatttca aatcagcact tgcagggana caacggggtt tttgaatant 60
atcacctggt atgaaaagtt ttcccaanaa accacaaacn antgttcatt ttttnctcctt 120
ttttgttaac tttttgccac actcaantca gtttaantcc tagcaaaaaa acggtagtta 180
ggataccact gtggctgtaa atgatgtnac actggttgaa tttgtgctgg cgtttgtgtn 240
acttccctcg ctgtttgtgt ttgattcgtt agggggcacc tggcttgaat tggctcgaan 300
gattgctcct gctgcactgc aatgtggccg cggccctggt tctggtgtgt aagtaaaggt 360
aaggctggtg gaataaatga ttccntcatt tcggancaaa gttactggaa cctggantgg 420
ttgncggacc atctccaacc ttctcggaat gcanaaatgt ctgggacaan acnnaacata 480
ctctctccnc acctggttca tantttcagc ttctacatcc cccaaaccac actcntaaat 540
ttggantgaa attctgtcct gttaattcaa acattgctac gtccccnccg ccattcaact 600
gaaag 605

<210> 594
<211> 666
<212> DNA
<213> Homo Sapiens

<400> 594
gaagagtttg tggaagatgg cgcctgttgt gacagggaaa tttggtgagc ggcctccacc 60
taaacgactt actagggaag ctatgcgaaa ttatttaaaa gagcgagggg atcaaacagt 120
acttattctt catgcaaaag ttgcacagaa gtcatatgga aatgaaaaaa ggtttttttg 180
cccacctcct tgtgtatatc ttatgggcag tggatggaag aaaaaaaaag aacaaatgga 240
acgcgatggt tgttctgaac aagagtctca accgtgtgca tttattggga taggaaatag 300
tgaccaagaa atgcagcagc taaacttgga aggaaagaac tattgcacag ccaaaacatt 360
gtatatatct gactcagaca agcgaaagca cttcatgttg tctgtaaaga tgttctatgg 420
caacagtgat gacattggtg tgttcctcan caagcggata aaagtcatct ccaaaccttc 480
caaaaagaac agtcattgaa aaatgctgac ttatgcattg cctcaggaac aaaggtggct 540
ctgtttaatc gactacgatc ccagacagtt ngtaccagat acttgcatgt anaaggaggt 600
aattttccat gccagttccc accagtgggg agccttttt attcnctctt gggatgatga 660
tgaatc 666

<210> 595

<211> 600
<212> DNA
<213> Homo Sapiens

<400> 595
gccacactca agtcagttta agtcctagca aaaagacggt agttaggata ccactgtggc 60
tgtanatgat gtgacactgg ttgaatttgt gctggcgttt gtgtaacttc cctcgctgtt 120
tgtgtttgat tcgttagggg gcacctggct tgaattggct cgaaggattg ctcctgctgc 180
actgcaatgt ggccgcggcc ctggttctgg tgtgtaggta aaggtaaggc tggtggaata 240
aatgattcca tcatttcgga ccaaagttac tggaacctgg actggttgcc ggacccatct 300
ccaaccttct cggaatgcag aaatgtctgg gacgacacag ancatactct ctccacacct 360
gtacatagtt tcagcttcta catccccaaa ccacactcgt aaatttggag tgaaattctg 420
tcctgtaagt tcaagcattg ctacgtcccc accgccattc aactgaaggc tctctaccac 480
aggcacagga atgactgggg caaggacagg gcccattccc tncataaaat gtntaatttg 540
gggncaantg tggcccccaa ccccccccca aagggcatna tttaacnccn ctttaattgg 600

<210> 596
<211> 835
<212> DNA
<213> Homo Sapiens

<400> 596
actgtggctt ctgcatttca aatcagcact tgcagggaga caacggggtt tttgaatagt 60
atcacctggt atgaaaagtt ttcccaanaa accacaaacn attgttcatt ttttctcctt 120
ttttgttaac ttttgccac actcaantca gtttaagtcc tagcaaaaan acggtagtta 180
ggataccact gtggctgtaa atnatgtgac actggttgaa tttgtgctgg cgtttgtgta 240
acttccctcg ctgtttgtgt ttgattcgtt agggggcacc tggcttgaat tggctcgaag 300
gattgctcct gctgcactgc aatgtggccg cggccctggt tctggtgtgt aggtaaaggt 360
aaggctggtg gaataaatga ttccatcatt tcggaccaaa gttactggaa cctggactgg 420
ttgccggacc catctccaac cttctcggaa tgcagaaatg tctgggacga cacanancat 480
actctctcca cacctgtaca tagtttcagc ttctacatcc ccaaaccaca ctcgtaaatt 540
tggagtgaaa ttctgtcctg taagttcaag cattgctacg tccccaccgc cattcaactg 600
aaggcctcta cacaggcaca ggaatgactg gggcaaggan agggcccatt ccctcataaa 660
atgtatactc tgccttatct gtgctaatga ttgtccagga aacgccanca ttttaccacc 720
tcnttattgg ttcttttggg antggaatgg cctgaaattg aaatattctt ccttgaaaaa 780
aggccaaata cntcttctgt ttccttnaag ggtaaaatgc ccatttttgg aattg 835

<210> 597
<211> 443
<212> DNA
<213> Homo Sapiens

<400> 597
agcagttcga atgccaggaa actgctcgag tgccaggtgc aggtgggggc ccccgaggag 60
gaggaggagg aggaggagga cgcgggcctg gtggccgagg ccgangccgt ggctgccggc 120
tggatgctcg atttcctctg cctctctctt tgccgagctt tccgcnacgg ccgctccgag 180
gacttccncn ggacccgcaa cagcgcanag gctattattc atggactatc cagtctaaca 240
gcttgccagt gagaacgata tacatatgtc agtttttgac aagaattgca gcaggaaaaa 300
cccttgatgc ncagtttgaa aatgatgaac gaattacacc cttggaatcn gccctgatga 360
tttggggttc aattgaaaag gaacatgacn aacttcntga agaaatacag aatttaatta 420
aaattcangc tatngctgtt tgt 443

<210> 598
<211> 491
<212> DNA

<213> Homo Sapiens

<400> 598
gtactttgag gagttcctac tcttctttct ttcttattaa ggtcttgttg ctgggttcca 60
tgttgcaact tagataanaa aagattcttg tgagacctca ataaggatac tgtaccctct 120
gaggattcag ttaccgcaga ctgtttgtca ctaacacttt ttcttgtatc caaattagct 180
tcagtttcca tttcaacatc attaccacta ggtttatctt gagaagttat tgttcttgtc 240
cttttgcttt ctactacttt tgccgctgcc ttcattagaa aggttgatga tttttcactt 300
agcacataat tcacataact cttaattttc tccatcatgt ggttgtagct gaagtgttga 360
aaaaaggaat gaaatgtatc tttctgagan attatcataa gcaatttgct tttgaaaggc 420
atatgagaat ttggatcacc aaatattctt tcaaagactt cttctgcttc tttaaagttg 480
ccattttcca t 491

<210> 599
<211> 802
<212> DNA
<213> Homo Sapiens

<400> 599
gtactttgag gagttcctac tcttctttct ttcttattaa ggtcttgttg ctgggttcca 60
tgttgcaact taaataagaa aagattcttg tgagacctca ataaggatac tgtaccctct 120
gaggattcag ttaccgcaga ctgtttgtca ctaacacttt ttcttgtatc caaattagct 180
tcagtttcca tttcaacatc attaccacta ggtttatctt gagaagttat tgttcttgtc 240
cttttgcttt ctactacttt tgccgctgcc ttcattagaa aggttgatga tttttcactt 300
agcacataat tcacataact cttaattttc tccatcatgt ggttgtagct gaagtgttga 360
aaaaaggaat gaaatgtatc tttctgagag attatcataa gcaatttgct tttgaaaggc 420
atatgagaat ttggatcacc aaatattctt tcaaagactt cttctgcttc tttaaagttg 480
ccattttcca tacaaacagc tatagcctga attttaatta aattctgtat ttcttcatga 540
agtttgtcat gttccttttc aattgaaccc caaatcatca gggctgattc caanggtgta 600
attcgttcat cattttcaaa ctgtgcatca agggtttttc ctgctgcaat tcttgtcaaa 660
aactgacata tgtntatcgt tctcaactgg cnagcctgtt aaactggaaa atccatgaat 720
aataacctct ggcgctgttg cgggtcctgc ggaaattccn cggaaccggc cgtcncggaa 780
aactcngcaa aagaaaaaaa gc 802

<210> 600
<211> 523
<212> DNA
<213> Homo Sapiens

<400> 600
gaaaagcaac ttttattgaa naatttggag ggaaggttcc atattatatt ataatagtaa 60
aaatactaaa gttgaatgtt gtaaaaaaac nccgtggtgc agcggcagcg gcagcgtctg 120
gccaggaggc gtggaggggc ccagggatgg ccacccccac agggagtcag ggagggcctg 180
gggcgacagc ggaaaggtta agcgtcnaaa aggtcaagtg ctaccgtgga naaatcatct 240
gagggggagg ctcccggtgg gacagtcacc aanaactgtn acacacaagg ggaaggggga 300
gggctttcct gtcacaaana ttaaaaaccc ccnaaatgca tttgaacaac atnatacacn 360
ataacaaatt taaaccttgc tcctctgtcc cactgggtna accctggccc atcccccatc 420
cctggtccca tcccaggggc ccagcctccg atnactcctc anaaacacng ccttnntgct 480
gggggggctgc tgtntncctg ccacccccnn gaaaaggtgc tgg 523

<210> 601
<211> 530
<212> DNA
<213> Homo Sapiens

<400> 601
aaaaccaact tttattgaaa aatttggagg gaaggtncca tnttatntta taatantaaa 60
aatactaaat ttaaattttn taaaaaaacc ccntgntgca ccggcancgg cancttctgg 120
ccaaaangct tnaaggggcc cagggatngc cnccccccnca gggattcngg gagggcctgg 180
ggcaanancg naaaggttaa ccntcnaaaa ggtcaattnc taccgtgnaa aaatnatctn 240
agggggangc tcccggtggg acactccccn aaaactntna cccaaaaggg gaagggggag 300
ggctttcctn tnncaaaaat tnaaancccc cnaaatgcct ttnaacnact ttntncccan 360
tnncaatttt naaccttgcn cctctntccc actgggtnaa ccctggccca tcccccatcc 420
ctggtcccnt cccnggggcc caccccccna taacttcctc aaaaaccngc cttnttnctg 480
gggggctgct nttttcttcc ccccccaana aaaggtnctg gccccccctcc 530

<210> 602
<211> 311
<212> DNA
<213> Homo Sapiens

<400> 602
gccnancagg nanccgccgc tgaagccacc gccgggtgcc cagcgccgcc gccgcccccg 60
agctcccccg cgcccctgcc cncgggcggn cggtgggcac cgggcgccat ggccgcgccg 120
gganccgctg cggntncgcn tgtgccnctt ggtgcncgga anancanggc tacngnttct 180
acctntacgt gtganannngg ccgccgcggg cacttcntcc ggcgcgtgna ncctctgttc 240
ccccgccgag gcngccgcgc tgtgctctgg ggatctnctg ntcnaggtca acntgcntca 300
acgtgnaggg c 311

<210> 603
<211> 289
<212> DNA
<213> Homo Sapiens

<400> 603
gcanagaaag gtttgtttta ttgcaattat ttaaatcncg tcccangggg gaggggaagg 60
gggangggaa gggggggtn tctggtnttn attngatncc tgtctgccan cttnnacatc 120
tatnangaan anaaccatca nenenentcc ctttcantca tctggcnect gcanaccatc 180
tttcgccctc tnccccccgc tgctctccna ctcccntgac cnctctcatc tctctccnct 240
ctgnctcctc nctctntctc tcatttctct gttncacnct ctctcccce 289

<210> 604
<211> 356
<212> DNA
<213> Homo Sapiens

<400> 604
ctgaagccac cgccgggtgc ccagcgccgc cgccgccccc gagctcccce gcgcccctgc 60
ccgcgggcgg ccggtgggca tcgggcgcca tggccgcncc gganccgctg cggccgcgcc 120
tgtgccgctt ggtgcgcgga nagcanggct acggcttcca cctgcacggt gagaanggcc 180
gccgcgggca nttcatccgg cgcgtggaac ccggttcccc cgccgaggcc nccgcnctgc 240
gcgctgggga ccgcntgntc naggtcnacn gcgtcaacnt ggagggcgat accaccncct 300
ngtgntgcnt acgatcnang ctgtnganggg gcanactcgg ctgctggtgg tggacc 356

<210> 605
<211> 290
<212> DNA
<213> Homo Sapiens

<400> 605

gcaaagaang gtttgtntta ttgcaattat ttanagcgcg tcccaagggg gaggggangg 60
gggangggaa gggggggtn tcttgctana aactggaaac ntgtttctta ccccnatntc 120
nnantcgact nccaccaact gtnnntcttc cttcctttcc cnangtccct anntaccncc 180
tnttgccctt ctnccccttn tttcccctcn cgctttccct nactctttat ctntcttntc 240
ctctctctct ctcacctctt tctccccctc ccttcacnct cacnttgtct 290

<210> 606
<211> 714
<212> DNA
<213> Homo Sapiens

<400> 606
cgccagaaaa agttatttta attttctatt aaacattctt ctcaaagcat tattttatcc 60
tatatctcac tgaattttaa gaaataacat tagtattaga aaaactagga aaaaagataa 120
atgcagataa ttaaacttac atgaaaaagg aaaattataa caaaggactg agaacgttat 180
aaattgaaat gagattataa tttgaaaact gcatctgaaa gcaaacttta ttgttcaatt 240
atncttaatg atggtgtttt atgactaata cactgatttt tcaagaagga aacccatgtt 300
aaaaatattt ttattttaaa aataagcctg tgttcaagct ctgatcatat ttcttttatt 360
ttgatttggg aanaaaatac tgtttctgat agcatgaaat gcaaaatttt tagattttta 420
atctcactaa ttttaanaac tattgagaaa ttgattaatg acatgaagtg cacaacacta 480
attactggcc agctgttggc attgtgtttc ttacttagtt ctcccaaggg aaaactctta 540
aattgaatct tcagcagaat aatccttaaa tatactttgt aagcaaaaca aaagcttttt 600
tgtttacata gttctttggg attttactgt tcctaatttt attctgaaac tcaattttac 660
cccagaccat aattaccata ttaactttgt tntgcacagt tgtttgccaa ttca 714

<210> 607
<211> 687
<212> DNA
<213> Homo Sapiens

<400> 607
attttaattt tctattaaac attcttctca aagcattatt ttatcctata tctcactgaa 60
ttttaanaaa taacattagt attagaaaaa ctaggaaaaa agatnaatgc agataattaa 120
acttacatga aaaaggaaaa ttataacaaa ggactgagaa cgttataaat tgaaatgaga 180
ttataatttg aaaactgcat ctgaaagcaa actttattgt tcaattattc ttaatgatgg 240
tgttttatga ctaatacact gatttttcaa taaggaaacc catgttaaaa atatttttat 300
tttaaaaata agcctgtgtt caagctctga tcatatttct tttattttga tttgggaaga 360
aaatactgtt tctgatagca tgaaatgcaa aatttttaga tttttaatct cnctaatttt 420
aagaactatt gagaaattga ttaatgacat gaagtgcaca acactaatta ctggccagct 480
gttggcattg tgtttcttac ttagttctcc caaggaaaac tcttaaactg aatcttcagc 540
ngaataacct taaatatact ttgttagcca aacaaaactt ttttgtttac atagttcttt 600
ggattttact gttcctaatt ttattctgaa actccatttt tccccagacc ataattaccc 660
tatttaactt tgttatgcac agttgtt 687

<210> 608
<211> 994
<212> DNA
<213> Homo Sapiens

<400> 608
ctcacccagt tgctcctcag atgtttgggt atgctggaaa agaacatatg gaaaaatatg 60
gaacaaaaat tgaacacttt gcaaaaattg gatggaaaaa tcataaacat tcagttaata 120
acccgtattc ccagttccaa gatgaataca gtttagatga agtgatggca tctaaagaag 180
tttttgattt tttgactatc ttacaatgtt gtcccacttc agatggtgct gcagcagcaa 240
ttttggccag tgaagcattt gtacagaagt atggcctgca atccaaagct gtggaaattt 300

tggcacaaga aatgatgact gatttgccaa gctcgtttga agaaaaaagc attattaaaa 360
tggttggctt tgatatgagt aaagaagctg caagaaaatg ctatgagaaa tctggcctga 420
caccaaatga tattgacgta atagaacttc acgattgctt ttctaccaac gaactcctta 480
cttatgaagc actgggactc tgtccagaag gacaaggtgc aacgctggtt gatagaggag 540
ataatacata tggaggaaag tgggtcataa atcctagtgg tggactgatt tcaaagggac 600
acccactagg cgctacaggt cttgctcagt gtgcagaact ctgctggcag ctgagagggg 660
aagccggaaa agaggcaaag ttcctggtgc aaaggtggct ctgcngcata atttangcat 720
tggaggaact gtggttgtaa cactctacaa gatggggttt tcccggaagc cgccagttcc 780
ttttagaact catcaaaatt gaagccngtt ccaaccaagc tctgcaagtn atnggtttaa 840
ngnaaaatct ngttttaaag gnggattgag aaggaaacnt naaagaggga angggggaaca 900
atttgtgaaa gaaaaatncg gnggggaattt ttgcccttca aggggaaana atggccctgg 960
ggggtaaaag anggccaccc tggggtggtg ggat 994

<210> 609
<211> 843
<212> DNA
<213> Homo Sapiens

<400> 609
ggccaaaaaa anttatttna atttcctatt aancntcctc cncaaancat tatttnaccc 60
tatnncncnc nganttttnan aaantacctt tnntnttaaa aaacctngga aaaaaaataa 120
tngcaaatan ttaaccttnc ttgaaaangg aaatttntac caanggacng aaancnttnt 180
aattngaant naaattatan ttngaaancg gcnncngaaa ccaancttna tggtccaatt 240
atcctnaang agggnntttn annactaatn cccngatttt ccaatangga ancccnnntt 300
aaaantnttt tnattttaaa aataacccng tntccaaccc cngatcanat tcctttnatt 360
tggattgggg aaaaaaatnc ngttccnnat accnngaann gcaaantttt taaatttta 420
acccccctan ttttaaaanc tatngaaaan tngattanng acttgaattg ccaaccctan 480
ttncnggcca ccngtgggcn tngtnttcct tacttantcc ccccaaggaa annccttaan 540
cngaanctcc nccaaaataa cccttaanta tccttggtaa ccaaancaaa acctttttng 600
tttacntant ccttgggatt taacgggtcc ccaatttnat ccngaaccca nttttccccc 660
naaccatant taccatttta ccttggtaag gcncagtngt ttgcantncc gcaaancagt 720
antnttcccc nggcnctttc ccccgancct tgggaaaaac gggatnggtc ccccccttaa 780
aaaacaacct tcccccncct ttggcccagg nnttnttccc gtctaaatcc gaacaataaa 840
aag 843

<210> 610
<211> 707
<212> DNA
<213> Homo Sapiens

<400> 610
ctagtctcga gtttttttt ttttttttaa cctttcctta tgagcatgcc tgtgttgggt 60
tgacagtgag ggtaataatg acttgttggt tgattgtana tattgggctg ttaattgtca 120
gttcagtgtt ttaatctgac gcaggcttat gcggaggana atgttttcat gttacttata 180
ctaacattag ttcttctata gggtgataga ttggtccaat tgggtgtgag gagttcagtt 240
atatgtttgg gatttttag gtantgggtg ttgagcttga acgctttctt aattggtggc 300
tgcttttagg cctactatgg gtgttaaatt ttttactctc tctacaaggt tttttcctag 360
tgtccaaana gctgttcctc tttggactaa cagttaaatt tacaagggga tttagagggt 420
tctgtgggca aatttaaagt tgaactaaga ttctatcttg gacaaccagc tatcaccagg 480
ctcggtaggt ttgtcgcctc tacctataaa tcttcccact attttgctac atagacgggg 540
tgtgctcttt tanctgttct tangtanctc gtctggtttc gggggtctta gctttggctc 600
tccttgcaaa gttatttcta agttnaattc attatgcnca angtataggg gttagtcctt 660
gctcatatta tgcttggtta taattttcca nctttccccc tgcggta 707

<210> 611

<211> 663
<212> DNA
<213> Homo Sapiens

<400> 611
ccattttata atgcgcttta tttgattaaa gaatttgcct tctttgtata cactggaatg 60
ttatattccc tatgtatttt acagggttac aaaatgtctc tcattttaaa tattacccca 120
aaagtaatct canaaaaaaa aggttttttg aaattaaact tgacttttaa aaaatcatac 180
ggacaaacaa ctttcaaaca aaactggatt agtaggattt cttgcctgct taactaacat 240
gacanacttc ttgtcccagg cccttctcan aaaaacctca tgtggaaacc aagctanaga 300
taanaattct tccctgatgc agttagggga aagggaaagg ctagaaactt ctttggcaag 360
caattccaca cacagccatt tatgtgtgag tgctctgctt caagcacagt acgctctttg 420
cagggacggc cagatgttca gagtgggagt ggtacttttc aaccagctaa aagtgcagaa 480
gtcatctant cgtctgcctc ttcccactgc cagtgcctgc agccttgcag caacttttaa 540
ccacccccta tgggactgga atnttgagtt aaaaagccaa ngctgaactg gctgacgctg 600
tantctccan tgaaaaggaa atgggatgaa atggaaaccg aaaaaccccc ngtnacntga 660
tga 663

<210> 612
<211> 621
<212> DNA
<213> Homo Sapiens

<400> 612
cattttataa tgcgctttat ttgattaaag aatttgcctt ctttgtatac actggaatgt 60
tatattccct atgtatttta cagggttaca aaatgtctct cattttaaat attaccccaa 120
aagtaatctc anaaaaaaaa ggttttttga aattaaactt gacttttaaa aaatcatacg 180
gacaaacaac tttcaaacaa aactggatta gtaggatttc ttgcctgctt aactaacatg 240
acaaacttct tgtcccaggc ccttctcana aaaacctcat gtggaaacca agctananat 300
aanaattctt ccctgatgca gttaggggaa agggaaaggc tagaaacttc tttggcaagc 360
aattccacnc acagccattt atgtgtgagt gctctgcttc aagcacanta cgctctttgc 420
agggacggcc anatgttcnn antgggagtg gtacttttca accagctaaa antgcanaag 480
tcatctantc gtctgcctct tcccactgcc agttgcctgc agccttgcag catcttttaa 540
ccacccctat nggactggaa tattgaatta taaacccngg ntgaactggc tgangctgtt 600
tctcccttga aaaggaaatg g 621

<210> 613
<211> 637
<212> DNA
<213> Homo Sapiens

<400> 613
catttnataa tgcgctttat ntgattaaan aatnngcctt ctttgtatac gcnggattgt 60
tatctcccct ntntatttnn gggggttaca anttntcnct catttnaant atnnccccaa 120
tantntnctn aaaaaaaaga ggtttganga aattaaactt gacttttaaa anatcatgng 180
gacaaacnac tttcaaacaa agctggatta gnaggatttc tngnctgctt aactaacatn 240
aaanacttct tgtcccaggc cctnctnaaa aaaacctctt gtggaaaccn agcnaaaaat 300
aananttctc ccctgatgca ntgggggggag anggagaggc taaaaacttc tntggcaanc 360
anttccacnc acngccattt ttntntnagt gcnctgctnc nancnnagta cgctctttgg 420
gnggacggcn anntnttnat agngggagtg gtnctttcaa ccagctaata ntgaagaaat 480
catctagtcg nctgcctctn cccactgcca gtgcctgcnt ccttgcaacn tcttttaacc 540
ccccctangg acnggattat nnagttaana ccgaggntga gctggntgac gctntctcct 600
ccatttgaaa angaaatgga taagatggaa ccgaaaa 637

<210> 614

<211> 673
<212> DNA
<213> Homo Sapiens

<400> 614
agattatgcc attgaggcta agaatagagt catttttgat ctaatttatg aatacgaaag 60
aaagagatat gaagatcttc ctataaatag caatccagtg tcttctcaga aacaaccagc 120
cttgaaggct acaagtggca aggaagattc tatttcaaat atagccacag aaataaagga 180
tggacaaaaa tctgggacag tgtcttctca gaaacaaccg gccttgaagg atacaagtga 240
caaggatgat tctgtttcga acacagccac agaaataaaa gatgaacaaa aatctgggac 300
agtgcttcct gctgttgaac agtgtttaaa caggagtctc tacagacctg atgctgttgc 360
acagcctgtg acagagaatg agttttcttt ggaatctgag attatttcaa aactatacat 420
cccaaagaga aagattattt ctccacgatc tataaaagat gtgcttcctc ctgttgaaga 480
ggctgttgac aggtgtctct acctactgga ccgttttgca cagcctgtga caaagggata 540
agtttgcttt ggaatctgag aatatttcag aaccatactt tacgaacaga aggactattc 600
tcaacaatct gcagaaaatt tagatgctgc atgtggcatt gacaaaacag aaaatggana 660
catgtttgaa gac 673

<210> 615
<211> 714
<212> DNA
<213> Homo Sapiens

<400> 615
cctctggcta tattcaaaac agaatctttc tcatcacttg aagccttcaa gcctggtggt 60
ttctcanaan acactgtcct agatttttct ccatccttgt tttctctggc tatacccaaa 120
acagaatctt cctcgtcact tgtacccttc aaggttggtg gtttctgana anacactttc 180
ctanatattt ctccatcctt ttttcctctg gttatattcg aaaaanaatc cttctcatca 240
cttgtagcct tcgaggctgg ttttttccga naagacactg tcctanattt ttctccatcc 300
ttgttttctc tggctatact caaaacagaa ccttcctcgt cacttgtanc cgtcaaggct 360
ggtggtttct ganaanacac tgtcccanat ttttctccat cctttatttc tgtggctatg 420
ttcgaaacag aatctttctc atcagttgta gccttcaagg ntggttgttt ctgaaaanan 480
ctgtcccana ttttttctcca tcctttattt ctgtggctat nttcgaaaca gaatcttcct 540
cgtcagttgt accttcnagg ntggttgttt ctgaaaaaan actgtcccac actgtatcca 600
tccttttatt tntgttanct atatcnaagc aaaatctgtt ttgtcccttg ttaccntttg 660
aaggtnggtn gtttctgaaa aataanctgt tccanatttt cccaccaccc attt 714

<210> 616
<211> 688
<212> DNA
<213> Homo Sapiens

<400> 616
cctctggcta tattcaaaac agaatctttc tcgtcacttg tagccttcaa gcctgatggt 60
ttctcanaan acactgttct anatttttct ccatcctttt tttctctggc tatattcaaa 120
acanaatctt cctcgtcacc tgtagccttc aaggctggtg gtttctgaaa anacactgtc 180
ctanatgttt ctccatcctt tctttctctg gttatatttg aaaaanaatc tttctcatca 240
cttgtagcct tcaaggctgc ttttttccga naanacactt caagcctggt ggttgctctg 300
aaaacactgt tctaaatttt tctccatcct ttttttctct ggctatattc aaaacanaat 360
cttcctcgtc acttgtagcc ttcaaggctg gtggtttctg aaaananact gtcctanatg 420
tttctccatc ctttctttct ctggttatat ttgaaaaana atctttctca tcacttgtan 480
ccttcaaggn tgctttttte cganaanaaa cttcaagcct ggtggttgct cngaaaaaac 540
tgtcctaaaa tttttctcca tccttttctt ctctnggcta tactcnaaac aaaatcntcc 600
tcgtcccttg ttncccttca anggtgggtg gtttctcgaa aaaaanactg tcctanaatt 660
ttcctccntc ccttttttte tctgggtt 688

<210> 617
<211> 721
<212> DNA
<213> Homo Sapiens

<400> 617
ttcgggcttc cacctcattt ttttcgcttt gcccattctg tttcagccag tcgccaagaa 60
tcatgaaagt cgccagtggc agcaccgcca ccgccgccgc gggccccagc tgcgcgctga 120
aggccggcaa gacagcgagc ggtgcgggcg aggtggtgcg ctgtctgtct gagcagagcg 180
tggccatctc gcgctgcgcc gggggcgccg gggcgcgcct gcctgccctg ctggacgagc 240
agcaggtaaa cgtgctgctc tacnacatga acggctgtta ctcacgcctc aaggagctgg 300
tgcccaccct gccccagaac cgcaaggtga gcaaggtgga gattctccag cacgtcatcg 360
actacatcag ggaccttcag ttggagctga actcggaatc cgaagttgga acccccgggg 420
gccgagggct gccggtccgg gctccgctca gcaccctcaa cggcgagatc agcgccctga 480
cggccgangt gagatccaga tccgaccact anatcatcct tataccgacg gggaaacnga 540
agccatanaa ggcgtgggcg cttgcaccac ttccgtccca tccttgcggg tacctggtct 600
atgcnggggt ncctaaggac cttggaaaaa acgctccccc gtcgttgctt cctggggaan 660
ggggcgttnc gctgcgcttc ggaacggggt tccttccaac ccgccggtct catttcttct 720
c 721

<210> 618
<211> 461
<212> DNA
<213> Homo Sapiens

<400> 618
ccaccancta anttattnnt ttaataacaa aaaaacancc ccacaaaact atngtaaaac 60
aatatttcca ntcggtnatc ntngtattnt acaatacaaa ncanttcccn caaaattctn 120
aaaancacca ancttnacca ttttttaaan tttctgcttt ncaaaaanta aaaacncnca 180
attgnantcc caccccctaa attctctggt nactattagg tntncaaaaa gnaccncccn 240
ctccncncca ttgcctcanc cncancccca ggctgnatnc atttaagggc ncattggccg 300
ccaatcggnc tnntccnccc ncaaatccgg caaggcnctt nggggnaaac ccacaaanca 360
cttattcccc ctngcccccc gaatggctgg ggtccgccgg tccctggggn aggcnctcca 420
ccaacncaaa atgcaatcnt ccncagnaac ccntgccgcc t 461

<210> 619
<211> 751
<212> DNA
<213> Homo Sapiens

<400> 619
cccgagggac cacagctggc agctccgggg atgccctcgg caaagcactg gcctcgatct 60
actccccgga tcactcaagc aataacttct cgtccagccc ttctaccccc gtgggctccc 120
cccagggcct ggcaggaacg tcacagtggc ctcgagcagg agccccggt gccttatcgc 180
ccatctacga cgggggtctc cacggcctgc agagtaagat agaagaccac ctggacgang 240
ccatccacgt gctccgcagc cacnccgtgg gcacagccgg cgacatgcac acgctgctgc 300
ctggccacgg ggcgctggcc tcaggtttca ccggccccat gtcactgggc gggcggcacg 360
caggcctggt tggaggcagc caccccgagg acggcctcgc aggcagcacc agcctcatgc 420
acaaccacgc ggccctcccc agccagccag gcaccctccc tgacctgtct cggcctcccg 480
actcctacag tgggctaggg cgancaggtg ccacngcggc cgccancgag atcaagcggg 540
aagagaagga ngacgangag aacacgtcag cggctganca ctcggaagaa ganaanaagg 600
aactgaaggc ccccgggccc ggaccattac ggaacaagtg ctgtcccttg naggagaaaa 660
actgaaggac cgggaaaagg cncatggcaa ttacnccccg ggaaccggtg cccttccggg 720
atattaacna aggcttccgg gaactggggg c 751

<210> 620
<211> 556
<212> DNA
<213> Homo Sapiens

<400> 620
aatacaacgt ttaatcatct ggttgatcaa aaaatgcaat gctcagtcta ggaacagcag 60
caaaaatagc ganagacacg ggacttttat acaaaaaaat ttgttgctta caaaacatat 120
gcaaaaaaag cttaaaaaaa ccaaaaacca aaggcagcat ccttgctaat tttcatctac 180
attaanaaaa aaaaaatctt gtaactaatg tttttatttn ccttaaaaaa aatatttcgc 240
ttaggcacaa tttgctggtg gctttaaaaa aataagccag gtttccacag catccccctt 300
gagtgatatn tttccatttc tccgcttttt atagttaagg catttttttnc tnctctgaca 360
aagtgtatgt tttgttgctt gctttcaggt tttgtttact ggaaaaaaaa aaaaatgccc 420
tgtcanccca ngcaanaggg ccaanatgca attcagggat ccntgggaca ggtccaaaat 480
gacccggggg ctgaaattcc gggacggggg aacaaggcnn tttaatngta ggccagggcc 540
canggaaccc tgaacc 556

<210> 621
<211> 708
<212> DNA
<213> Homo Sapiens

<400> 621
ccacttnaat tcctttatnc ancaatatta tccnaaaagg aaaaatcagg atttacaaaa 60
acaatttaan tgcaatataa aaccctacta aatacaaata caattncaca aacncntatg 120
caacaaaaac ttgtttaaat ngttccttna atttnnacta cttaaaanca taggtntaaa 180
ggaaaaacnt ncaaactggt ccacttgggc ttnttaccag gcaaagnaac cctgcttncc 240
aaaaactnat atattccaaa ttcncggcat ntggnaatnt tnccatggac nctgnatctt 300
aacaaatgct atantnttta caaaactacn cccncaaaaa aaccccaagg aacctgcagg 360
ctaancccta tnctttaaa gggctnaagg aaccaaacct attttaancc tnttngtttg 420
cnccatgcaa aactttatgn aaaaccccca aactaggcta tttancnnct nccatnaatg 480
gncccaaat catntnatnc tacggcataa acaacanctg ccctatttac ncggaacctg 540
caaanctcac aagnaatgtg aattngcnct ngggantcaa tgttnccggg tnaattatct 600
tggatnanaa ccnttttcta catnactatt gaaaaaacct gtggtttctt gctttttaac 660
aaatnnggtg ttcctttgcc ccccccccct atttttcaag ggctgggt 708

<210> 622
<211> 675
<212> DNA
<213> Homo Sapiens

<400> 622
atcacagtcc agagagtcct agaggaggac gagagcataa gancttgcct tagtgaagat 60
gcaaaagaga ttcagaacan aatagaggta gaagcagatg ggcnaacaga agagattttg 120
gattctcaaa acttaaattc aagaaggagc cctgtcccag ctcaaatagc tataactgta 180
ccaaagacnt ggaagaaacc aaaagatcgg acccgancca ctgaagagat gttagaggca 240
gaattggagc ttanagctga agaggagctt tccattgaca aagtacttga atctgancaa 300
gatntaatga gccaggggtt tcatcctgaa agagacccct ctgacctana aaaagtgaaa 360
gctgtggaag aaantggaga anaagctgag ccagtncgta ntggtgctga gagtgtctct 420
gagggtgaag gantagatgc tacttcaggc tccncagata gttctggtga tggggttacn 480
tntccatttn aaccngaatc ctggaagcct actgatnctg aaggtntgan gcnntntgac 540
ngggagttct gctggacttc cagttcatgc ctgcctggta tnctttnccc gagggcctgc 600
ctcctntcag tgatttggtt cttgacaaga tccnccntcc ccctttgcc aatgccgaac 660
tctgggatcc ttcga 675

<210> 623
<211> 713
<212> DNA
<213> Homo Sapiens

<400> 623
gctaaacatt tttttaagta tgagtccttg tttaaaaaga aaagattaaa acagaaaata 60
ttttctataa ataatacatg tattttggtt ttagtgctcc cgccctaagg tttgaagttt 120
acttttatcc agtacctttt tcctccatga tcacctttt ttctctttcc cctctcccac 180
tcgtgcacac gtgggggttt ctgcgagaat tggccttgct gcactgtgat tggcgaanac 240
gtgaaacttt ttaaaaaaat acttaaattg tttcttttgt ttcattttgt gtatttgaag 300
ttttagttat cctcagactc ctcttctgct tcccgcagcc acgtgaagaa tgccgtgaca 360
gatttcagag ccacgccctt cccattctgc tctgcagggt ccttgctgct ctcccatttg 420
tagaaggcat cctcggagat cacctcctcg tcatatagac aatcaaaaaa catccgcagc 480
aaattggcag gttgatcaag ttttactatc gatgcttgta gtgcataaag tgctgcagtt 540
ccttctctgt atctgantct aggtacttga gtaagatcgg cactctctgc ttgataacag 600
cagtgtccac tctgaaggta naagaatcng gttattatag cttgctttaa caaacagcng 660
tcnttaaagc tctaaggaat gttangtgaa atncactgga tttcgtctaa att 713

<210> 624
<211> 554
<212> DNA
<213> Homo Sapiens

<400> 624
cattcnagaa agatnttaca cacggagttt nctcantatt gggctcaacg ggaagctgac 60
tttacggana ctctgcttca agtaacgana gatattanaa ganaatgctg gancgtcgtt 120
tggctatctt cnaggatttg gttggtaaat gtgaccctcg agaanaagca gcgaaagaca 180
tttntgccac caaagttgaa actgaagaag ctactgcttg tttagaacta actttnatcc 240
aattaaagct gaattagcta aaaccaatgg agaattaatc tcnaccncnc acnanttcnc 300
ccagaganaa natgaatccg attcattgat tcaagagctt gagacatctg ntaaganaat 360
aattncacan aatctggaga attnnagaat tgatnaatat nattgatcnn tcgaagatac 420
tatcancgaa tttcagaacc tnangtctca tatggaaaac tcntttaaat gcnatgacaa 480
ggctgataca tcttctttaa taataaacaa taaattgatt tgttatgaaa cagttgaagt 540
acctaaggga cagc 554

<210> 625
<211> 551
<212> DNA
<213> Homo Sapiens

<400> 625
gactgcatgt tctcatttat ttatgggatc taaaaataaa atcaattgac ctcatgggca 60
tacanantaa aaaaatggtt accagtggct ggtaagggta ctgacggttg caggggagg 120
tggggatggt taatgggtac aaaaacaaat aagatnaaaa gaatgattta atatctgata 180
gcacaatana ntgactataa tcaataataa cttacttgta tatttttaaa tgatctaaaa 240
aatgtaattg gattatctgt aattcaaagg aaaaatgctt gaggggatgg atacctcatt 300
ctccatgata cacgtntttc acattgatgc ctgtgtcaaa acatctcaca taccccgtaa 360
atatatacat gtactatgta ccacaaaatg tttacaaaat aagtganaca ttctaattaa 420
agactgaaat ctttttctaa ataatgtata tacatgtttt gtgatctgta cacacttatt 480
ctccaaatcc taactntant cccaacanat atnttaaatc cttgtttanc ngaataagtt 540
aaaaaaatcc t 551

<210> 626
<211> 680

<212> DNA
<213> Homo Sapiens

<400> 626
atttggtaac aggattaaaa agaaattttt aattccttgt ctctcttctg atggctgaac 60
agaactgcgg tgtcaaatgg aaagcagcac acaagaattc ccttgcagac cttgatcttt 120
cgcanaaatg caaagacgcc tgagttatac aacttgcaat tattattttc tanacagaag 180
tgccaactgt tgtgctttcc agtgtatcag tggttgctac attctccttc ttgtcttcgg 240
gtttcatggc aggaaacaga agtacttcct tgatgttgtt ggagtccgtg agaaacatgg 300
cgactcgatc aatgcccatg ccccagccag ctgtgggggg cagcccatat tccagggcag 360
tacagaagtt ttcatctatg aacatggcct catcatcacc tgcagccttg gccttggcct 420
gttcttcaaa aanctgccgc tgccgcatgg gatcattcag ctcagtatac gcattgcata 480
tctctttctt catgacaaac agctcaaanc gctcagtcag acctctttaa ancggtgcca 540
tttaaccnaa gggccattat ctgtgggtga tcacagatga atgtnggatt gatgcaagtc 600
acttccanga actccccaac aancttgtca aggaacctgg ctgtggtcca angtggaagg 660
catccacanc ttttgccccc 680

<210> 627
<211> 753
<212> DNA
<213> Homo Sapiens

<400> 627
acaaatatga acgtctgaag gcaaaccagg tagctactgg cattcggtac aatgaaagga 60
aaggaaggtc tgaactaatt gtcgtggaan aaggaagtga accctcagaa cttataaagg 120
tcttagggga aaagccagag cttccagatg gaggtgatga tgatgacatt atancagaca 180
taagtaacag gaaaatggct aaactataca tggtttcaga tgcaagtggc tccatgagag 240
tgactgtggt ggcanaagaa aaccccttct cantggcaat gctgctgtct gaagaatgct 300
ttattttgga ccacggggct gccaaacaaa ttttcgtatg gaaaggtaaa gatgctaatc 360
cccaagagag gaaggctgca atgaagacag ctgaagaatt tctacagcaa atgaattatt 420
ccaagaatac ccaaattcaa gttcttccag aaggaggtga aacaccaatc ttcaaacagt 480
tttttaagga ctggagagat naacgatcag agtgatggct tcgggaaagt ttatgtcaca 540
gagaaagtgg ctcaantnna acnaattccc tttgatgcct cnnaattacn cagttctccg 600
cagatggcag cccagcacaa tatggtggat gatggttctg gccaagtgga aatttggcgt 660
gtncaaaaca atggtaggat ccaagttgac cnnaactcct atggtgactc ccatggtggt 720
gactgctact tcatactcta cacctatccc tga 753

<210> 628
<211> 675
<212> DNA
<213> Homo Sapiens

<400> 628
ggtgtttcca aaggctttta ataaggttaa aaaaaaaata aaatnccnct taaaaaataa 60
cncttancan ttaatgacat caaantcncn ttgactaaaa aaggaaaata ncaaccaatt 120
gttaaancca ccttaacata aaccttatng caattntaca cntcttttga acncaatcta 180
taaaaaaaaa aataactncc anggcattac aacttttnct ctggcatntt aaaaaacaac 240
tctnactaat ggctaatgca ttataaaatt ncctatctna caaatcttnc taaattatgc 300
atagtatttt acttttnaaa ggtcntaaaa aaaatataaa tcanttncca taaaanctaa 360
tatnggccca taacaaaant tccctncagg ttatttaat ntnttaacnt aaaaaaacnc 420
cagntgaaaa aaaattncaa nccaaaacta accnttaaaa aataggcntt nggttnaggt 480
taatttttt ttttttttt ttgnaaanaa antcnctntt gcccagnctg gattgtggtg 540
gcnccaatcc tggctcactg caacctcagc ctcctgggtt caagcaattt ncctgtctca 600
gccttccaan ttccngggaa tacaggggtn cnccaccacn cccagctaaa ttttttttgt 660
ttttttant aaaag 675

<210> 629
<211> 677
<212> DNA
<213> Homo Sapiens

<400> 629
aagatcagcg atatcacgcg tcccccggag catcgcgtgc aggagccatg gcgcgggagc 60
tataccacga agagttcgcc cgggcgggca agcaggcggg gctgcaggtc tggaggattg 120
agaagctgga gctggtgccc gtgccccaga gcgctcacgg cgacttctac gtcggggatg 180
cctacctggt gctgcacacg gccaagacga gccgaggctt cacctaccac ctgcacttct 240
ggctcggaaa ggagtgttcc caggatgaaa gcacagctgc tgccatcttc actgttcaga 300
tggatgacta tttgggtggc aagccagtgc agaatagaga acttcaagga tatgagtcta 360
atgactttgt tagctatttc aaaggcggtc tgaaatacaa ggctggaggc gtggcatctg 420
gattaaatca tgttcttacg aacgacctga cagccaagan gctcctacat gtgaagggtc 480
gtanagtggt gagagccaca gaattcccct tagctgggac agtttcaaca agggtgactg 540
cttcatcatt gaccttggca ccgaaattta tcanttggtg tggttcctcn tgcaacaaat 600
atgaacgtct gaaggcaaac cangtancta ctggcattcg gtncaatgaa aggaaaggaa 660
ggtctgaact aattgtc 677

<210> 630
<211> 665
<212> DNA
<213> Homo Sapiens

<400> 630
gagacagagt ctctgttgcc caggctggag tgtggtggcg caatcctggc tcactgcaac 60
ctcagcctcc tgggttcaag caatttcct gtctcagcct tccaagtagc agggactaca 120
ggcgtgcacc accacgcgca gctaattttt ttgtattttt agtaaaggcg aggtttcgcc 180
atgttggcca ggctggtctc gaaatcctga ccccagtgat ctgcctacct catcctctca 240
aagtgctggg attacaggtg tgagccaccg cgcccagcct taattttcaa aagacaaata 300
agcaaaaagc ttttcccgtt cctctcccaa aacagcaatg agataactgc cttgtaatgt 360
ttgtttgctt tttacaaata ccaatttacc acttgctgga atcccagccc aggaaccagc 420
ctgtgaatgt gggtggctca tggccctgtt ttatgatgac aattggtgtc ctcttgtctc 480
ttccagaagg gtctgtctca aggtacattt tggcanactt caaagattct tttttctcaa 540
cttcattagc atctttgcca atccaaataa atatctgttc ccaagcatct agtaacatga 600
catcatcttc agctaaatca tcctgggtga actctccctg gaatctcttc aataacaaat 660
ctccc 665

<210> 631
<211> 698
<212> DNA
<213> Homo Sapiens

<400> 631
ctgaggagct ggtggtcttt gaggatttga atgtatttca ctgccaggaa gaatgtgtga 60
gcttggatcc tactcaacaa ctcacgtcag agaaggaaga tgacagcagt gtcggggaaa 120
tgatgttact ggtcaatggc agtaatcctg aaggtgaaga tcctgagagg gaacctgtan 180
aaaatgaaga ttatagagaa aagtcttcag atgatgatga aatggattct tccttggtct 240
ctcagcagcc tcccgataac caggaaaagg aacgactaaa tacatccatt ccacaaaaaa 300
ggaaaatgag aaatctgtta gttaccattg agaatgatac tcctctagag gaactctcaa 360
aatatgtaga catcantatt attgccctta ctcgaaatcg gaggacaagg agatggtaca 420
cttgtccact gtgtgggaaa cagtttaatg aaagttctta cctcatttcc caccagagga 480
cccacactgg agaaaaaccc tatgactgtn ntcactgtgg gaaaagcttc aatcatnaaa 540
caaacctcaa taaacatgag cgaattcnta caggagagaa accttattcc tgttctcagt 600
gtggaaaaaa cttccgtcng aattctcatc ggagtcgtcc tgaaggaatc catntaacgg 660

agaagatatt aagtgtccan aatgtgggaa aacctccc 698

<210> 632
<211> 466
<212> DNA
<213> Homo Sapiens

<400> 632
atcacaaatt gtaaatatta ttgaaattga ttgcaaattt agatcacata caaatgagag 60
tctgacattc aactgttttc ctatattcca aagtaaacaa ttcctttcaa cactcaagac 120
ttaaacaggt attcttagag ggttatatga attgctatca gaagctgttg gctaacaagc 180
cagtaatttg gttctttcac canaacacag ttccagataa gcatctttgc actatttctc 240
aantatgaat ccccatgtgg ggggaaaacg gatatacttt caatagacac aagtcactct 300
ttgccttcca agtaagcana ctccagattc atcttcaaag tgttgggaaa ngggatctgt 360
gacctgtnca ttatcatata acttcaaaaa ggaaagctcc ttantccaaa aagcctanat 420
gctgaggtat agcccttgaa atgttttctt ccctgtnaat ttccta 466

<210> 633
<211> 734
<212> DNA
<213> Homo Sapiens

<400> 633
cacatacagt ctttgtttta atgtttattg gtagaaacag atcttcaatg catactttgt 60
gtttatataa actctacatt ctcttaaagg ttttcgtttt gttttcactg gagattttta 120
gcctccaagt gaacttaaca tattgcctat gcatctgatt ctttatanac ttttanattt 180
taaaactaaa tttganaaac catgcatact gtatacctta tttaataatc caaanaattg 240
tttgcacttt caaaaaagtt acaaaaaggc tgaacacaag ttaaataacc tatatgatgt 300
aaattttcca tttctgaata ctttttcagt attatatatt gcttgctgtc taataagtta 360
gattgtcaga nacgcttcag taaattatct ctactttaaa attatatctg aatccccttt 420
ctctganatg aacttgccaa tattaaacat tgtgccatat gcagtattan cccaaaagct 480
taaataagaa ccaaacttgt agactgaata ttttaacctt aaaattatat acctatatat 540
ncacctatgg tatgctgcat attaaattta acatttcaag taacatatat atagcaaaca 600
ttcagccaaa tactctttca tgaaaagata ctgtccttaa aataaaaagt tantgaaaag 660
cttatttaga ccnaatgtct aaatataant nctaagccta tgaaacttga anctaaagtc 720
tgctgtncta ttta 734

<210> 634
<211> 822
<212> DNA
<213> Homo Sapiens

<400> 634
ctcctgtgct tacacctgta gaaaaacacc agagcagaga gtatctcaag tgatgaagag 60
gttcatgaat ctgtggattc agacaatcag caaaataaaa aagttgaagg tggatatgaa 120
tgtaaatatt gtacttttca aactccagat ctaaatatgt ttacttttca tgtggattcg 180
gaacatccca atgtagtgct aaattcatcc tatgtttgtg tcgaatgcaa ttttcttacc 240
aaaaggtatg atgcactttc tgagcataat ctgaaatatc acccaggaga agagaatttt 300
aagttgacta tggtgaaacg taataaccag acaatctttg aacaaacaat aaatgatctg 360
acttttgatg gtagttttgt taaagaggag aatgcagagc aagcagaatc tacagaagtt 420
tcttcttcgg gaatatctat cagtaaaact cctatcatga aaatgatgaa aaataaagtg 480
gaaaataaac ggattgcagt tcatcataac tcagttgagg acgttcctga agagaaagag 540
aatgaaatca aaccagaccg tgaagaaatt gtagaaaatc caagttcttc agcttctgaa 600
tctaatacaa gtacttccat tgtaaacaga atacatccaa gtactgccag cacggtagtg 660
acccagcagc agttcctccc tggattgggc ccaggtgata actgctgtnt ctgctccgcc 720

agaattctaa tttgattccc naagtcttaa tccctgttna tancatcccc cctacaatgc 780
tgcnttggat aacaaccccc tttttactta acccctacan cc 822

<210> 635
<211> 819
<212> DNA
<213> Homo Sapiens

<400> 635
acccatttct aacaattttt actgtaaaat ttttggtcaa agttctaagc ttaatcacat 60
ctcaaagaat agaggcaata tatagcccat cttactagac atacagtatt aaactggact 120
gaatatgagg acaagctcta gtggtcatta aacccccctca gaaagtctaa gattcagaat 180
gtctccatca tattagaaga aaaatgtact gtattaaaat ttaaattgca tttttacaag 240
ttgtttttta attagtgttc tatttacatt gcanaacttc caccaactgc agtagtttaa 300
ctttggcaca acattaagtt ccatttcttt tgggtattgg atcctgcttt ttgagtgtgt 360
atgccccaaa acgttttcaa tgtcatcaaa gattgggcaa attcacagta aatcagacat 420
cttgagttga agaattgatt ctccttcaac gttttaggca gatttcagtc atctgattta 480
gacagcttcc gtttcacatg tcgtggaagt cccaagtgtc actatcatct gtttcttctt 540
catcctcttc ctggtcatca ataacttcat cttcctcctc attttcctca aataattcta 600
tacctaattc tgatcttctc tgtctttctg caaaccactc tctgacctgc tcatanccca 660
tatgtgattt gttaacaaat tcatcaaggt cttgctcatt aaaaaacttg tgcttcaggt 720
tataatcctt aantttttgcc gttccagttt taaattttat gaatnaatgg tcccctggtc 780
cccagttgtt aattcctttt ggctcctcca aggcgccca 819

<210> 636
<211> 704
<212> DNA
<213> Homo Sapiens

<400> 636
aaaaagttat ttatttattc ttttttttttt ttttttttttt ttggtaaggt tgaatgcact 60
tttggttttt ggtcatgttc ggttggtcaa anataaaaac taantttgan anatgaatgc 120
aaaggaaaaa aatattttcc aaantccatg tgaaattgtc tcccattttt tggcttttgg 180
gggggttcag tttgggttgc ttgtctgttt ccgggttggg gggaaagttg gttgggtggg 240
agggganccag gttgggatgg agggagttta caggaagcan acagggccaa cgtcnaagcc 300
naattcctgg tctggggcac caacgtccaa gggggccaca tcnatnatgg gcaggcggga 360
ggtcttggtg gttttgtatt caatcactgt cttgccccag gctccggtgt gactcgtgca 420
nccatcgaca gtgacgctgt aggtgaancg gctgttgccc tcggcgcgga tctcgatctc 480
gttggaaccc tggagganca gggccttctt gaggttgcca gtctgctggt ccatgtaggc 540
cacgctgttc ttgcantggt angtgatgtt ctgggagcct cggtggacat caggcgcagg 600
aaggtcacct ggatgccaca tcngcanggt cggaaccctg gccgccatac cccaactggg 660
aatccatcng tcatgctctc cccgaaacaa aacatcctct tgtt 704

<210> 637
<211> 693
<212> DNA
<213> Homo Sapiens

<400> 637
gaaagcaaat ttcttttaat ganaactcaa aattaaactt caaagggacc caacgtcata 60
cttccattca gggacttgat acaaaaaatt tagtttgaac tgctattagc aggtggcagg 120
agccaccttc aaatgaatct tcaaattgga aaatactgct tcaccacctg ttggggataa 180
nttgcaaatg gaataattta gtatggtttg tagctatttt gatnaccacc tcgcctgnat 240
accttcccat aaccactctg ctggtcacca cctcttccac aagctcttcc tgcaaatcct 300
cctctaaatc cccactgttg ctgttgctga tattgtncct tcgacatggc tacttttatt 360

tcacatttac taaaaccaac attgtggtat ttcttttcca ttatcttctt cactggttct 420
tcttccttaa aggtaataaa gcaaaaccca cgcctcttat tggtcttgtt gtccatgggg 480
agctctatgg attccacctc accaaaacca ccaaagtact cccttatttt ctcttcaggt 540
gtatctggan aaaggccacc ancnaaaatt ttttaaccgg ctcttttgtt tccatggctt 600
tgggcctttt angatcaatc accttcccca ttcaatttat gttctttttg gatccatgaa 660
cctttntcta cncctcccg aattccttaa ata 693

<210> 638
<211> 619
<212> DNA
<213> Homo Sapiens

<400> 638
gcactctgaa gttagatcct atcacagggc gatcaagggg ttttggcttt gtgctattta 60
aagaatcgga gagtgtanat aaggtcatgg atcaaaaaga acataaattg aatgggaagg 120
tgattgatcc taaaagggcc aaagccatga aaacaaaaga gccggttaaa aaatttttgt 180
tggtggcctt tctccagata cacctgaaga gaaaataagg gagtactttg gtggttttgg 240
tgaggtggaa tccatagagc tccccatgga caacaagacc aataagaggc gtgggttctg 300
ctttattacc tttaaggaag aagaaccagt gaagaagata atggaaaaga aataccacaa 360
tgttggtctt agtaaatgtg aaataaaagt agccatgtcg aaggaacaat atcagcaaca 420
gcaacagtgg ggatctanag gaggatttgc angaagagct cgtggaagan gtggtggccc 480
cactcaaaac tggaaccang gatatantna ctattggaat cnaggctatg gcaactatgg 540
atatnacagc ccaggttacc gtggttntgg aagatatgac tncactggtt acnacaacta 600
ctatggatat ggtgattat 619

<210> 639
<211> 694
<212> DNA
<213> Homo Sapiens

<400> 639
cggcggcgcc attaaagcga ggaggangcg agagcggccg ccgctggtgc ttattctttt 60
ttagtgcagc gggagagagc gggagtgtgc gccgcgcgag agtgggaggc gaaggggca 120
ngccagggan aggcgcagga gcctttgcag ccacgcgcgc gccttccctg tcttgtgtgc 180
ttcgcgaggt acagcgggcg cgcggcancg gcggggatta ctttgctgct agtttcggtt 240
cgcggcagcg gcgggtgtat tctcggcggc agcggcggag acactatcac tatgtcggag 300
gancanttcg gcggggacgg ggcggcggca ncggcaacgg cggcggtagg cggctcggcg 360
ggcgaacang anggancat ggtggcggcg acacangggg cancggcggc ggcgggaacn 420
gaccgggacc gggggcggaa ccgcntctgg angctccnaa gggggcnncg ccnaatccga 480
aggggcgaaa attgaccccg tatgaaccaa gaagatgaat ggaaaatgtt tatangaagc 540
cttanctggg acactnccca gaaagatctg aaggactact tttccnaatt ttgggtgaaa 600
ttgttaaact gccctcttga aattttnatn ctatcccngg ggcnatcaaa ggggtttttg 660
gctttttcc tattttaaac aaatcccgaa aaat 694

<210> 640
<211> 728
<212> DNA
<213> Homo Sapiens

<400> 640
cgccactgcn gcaggaggcg tgaggggata aaaacattca gatggcagat cacagttttt 60
cagatggggt tccttcagat tccgtggaag ctgctaaaaa tgcaagtaac acagaaaagc 120
tcacagatca ggtgatgcag aatcctcgag ttctggcagc tttacaggag cgacttgaca 180
atgtccctca cacccttcc agctacatcg aaactttacc taaagcagta aaaagaagaa 240
ttaatgcatt gaaacaactt caggtgagat gtgctcacat agaagccaag ttctatgaag 300

aggtacatga cttggaaaga aagtatgcag cgctatacca gcctctcttt gacaagagaa 360
gagaatttat caccggcgat gctgaaccaa cagatgcgga atcggaatgg cacagtgaaa 420
atgaagagga agagaaattg gctggagaca tgaaaagtaa agtagtcgtc acagaaaaag 480
cagcggcaac ggctgaagag ccagatccca naggaattcc agagttctgg tttaccatct 540
tcagaaatgt ggacatgctg agtgaattan tccaggaaat atgatgaacc aatcttgaaa 600
acacctgcag gatnttaaag ttgaaatttt ctgaccctgg acagcctatg tcttttgtgt 660
tagaattcca ctttgaaccc cacgactact ttaccaactc agtcctgaca aaaaccttac 720
cagatgaa 728

<210> 641
<211> 732
<212> DNA
<213> Homo Sapiens

<400> 641
acctaattag atagaagttc aggaatttct atttcttttg ggttgatgaa ccacaggcta 60
gcataagtcc actgtcaata aatgtttgtt gtggccagac ctccataaaa gagatattcc 120
ctgtgttcac aagttccctg aagcttaggt tttgagagaa tattgttgag tcactaggca 180
gggctcacat aggaaactgg caatcacctc tgaaactgct tcacagacac ctgcttttcc 240
tgctctgttc ctcanacttc tcctcttcaa gcgtattccc cccacaacaa ggacagcagc 300
ttggactaca tatctggctg atgatgtaat aaaaagatta ggcatggggg tttcctaagc 360
cacaattcag ggccactctg caccaacaga gataagcacc caggtggaag ccccccttcc 420
ccgagcctca tacattgtca tcatcttcta tggcctcccc agtgaagtac agcacagccc 480
gcgggactat ccgctcacgg aaaaagtgtc caatttcaaa atcagaagct aatgtgaatt 540
caaaatcttc atccagtgat ctccatcccc ggatgctttc caatggattg aagaaattga 600
aaaaggactc attgggtact gtttcgtaat tgttctaaca gtgcctcaac cttatgcttc 660
tgctttncnt ggaaggtntt gaaagtaaca ttcttncctt cttccaantc aattattnac 720
ccccgttcac aa 732

<210> 642
<211> 582
<212> DNA
<213> Homo Sapiens

<400> 642
gcttttcttc ttcctcctct tctgattctg gctcttgctt tatttgtggc tgcctgcgcc 60
tctcagcctc ttgttccatc ctctggagct ctgcatctgg atctggatgc ccttctgcca 120
naaggcgctg cctgatttcc tcaagctcct ccttctctct cttcctatct cgttcatctg 180
cttccatttc cttttctcta tcacgcaacc ttttctgaaa agcacttcct ctgtaatatt 240
tggggtcatc tctatcatca tcatagtctt ctaanaattc ttttagtcgt ttagcttctt 300
tggccatttc tcttcttctt tcttcttctc tttcagcttc tttctcatat tcccgggttt 360
tctttcgttc tctgatttcc caattcttaa ggcgctcttg ataancagct tctttctctc 420
ggantttttct ttcaagtttt cttcgttcgt atgcatcttc ttcatcttct tctcggtccc 480
gttttttgtc tttttctctt tctcgctccc gttcctctct cnctctctct ctcgctcccg 540
ttctcgttct cgctctcntt ctctctctct ctctctttcc cg 582

<210> 643
<211> 784
<212> DNA
<213> Homo Sapiens

<400> 643
aagaaaagct caagtttcca agtctcttaa gggagcgatt aggcatgtca gctgatccag 60
ataatgagga tgcaacagat aaagttaata aagttggtga gatccatgtg aagacattag 120
aagaaattct tcttgaaaga gccagtcaga aacgtggaga attgcaaact aaactcaaga 180

cagaaggacc ttcaaaaact gatgattcta cttcagggag caagaagctc ctccactatc 240
cgtatcaaaa ccttctctga ggtcctggct gaaaaaaaac atcggcagca gggaagcaga 300
gagacnaaaa agcnaaaagg gatacaactt gcatcaagct aaagattgat agtgaaatta 360
aaaaaacagt agttttgcca cccattgttg ccagcagagg acaatcagag gagcctgcag 420
gtaaaacaaa gtctatgcag ggaggtgcac atcaagacgc tggaaganat taaactggag 480
anggcactga gggtgcagca gagctctgag agcagcacca gctccccgtc tcaacacgag 540
gccactccag ggggcnaggc ggctgctgcg aatcaccnnn agaaccggga tgaaagaaga 600
gaaganccтt ccgggaaggg aatgaagttg attctcagag cngtattaga acngaagcta 660
aagangctcc gggtgagaac nccggggttg acctccctaa aattccagtc cagagatgtn 720
agacctgaaa gagaacccct gccganaccg ccgggaaagg ganaaatccg tcttgacccc 780
cttc 784

<210> 644
<211> 749
<212> DNA
<213> Homo Sapiens

<400> 644
cctacatcag ttttatttaa aacacaaaca agtatttctc tttctgtaag ggcaaatggt 60
tcaaataatg cggaacacga aacattgact aatacaagtg ctttaaatat gaaacaaaat 120
tatttttaa aaaagcaaaa naataaagaa tatatacaaa agggacctgn aatctgtaag 180
gtgattccaa aaacnaaata antagaaaat ccatggtgaa acctgaacat tctacctctg 240
ctttggagaa gggctatcat acaacattca gtcagctgaa natggattgg tanaggtgtg 300
tctatacata aacttcagtc atttttgctt gtgcanaatc atcccaatct tcccaanact 360
gaatgggcag tcctgtggct ttcttccttt tccatattcc caacaaggct acgtgaagtt 420
caactcttga tgagccgctt acaacagcag ttccttaggg agccaacatg acaggtgggt 480
canatttccc tatgagaaac aaaactggcc acctacagca aaatatcaaa atgggtaagt 540
ccttccttcc tcttcctcct gattatatac aacatatctc ctttcaagac tattatttcc 600
atcatgctta ttccttcaca aatctaaacc ttgaggtgat atgaaggaaa ccancntcaa 660
aaaaaagaaa actcaattcc gaaatgaana aaactgggcn nggtatncaa tacnccccan 720
aacatctcca tatccctggc ccagttacc 749

<210> 645
<211> 751
<212> DNA
<213> Homo Sapiens

<400> 645
agactttcct acatcagttt tatttaaaac acaaacaagt atttctcttt ctgtaagggc 60
aaatggttca aataatgcgg aacacgaaac attgactaat acaagtgctt taaatatgaa 120
acaaaattat tttttaaaaa agcaaaagaa taaagaatat atacaaaagg gacctggaat 180
ctgtaaggtg attccaaaaa cgaaataagt agaaaatcca tggtgaaacc tgaacattct 240
acctctgctt tggagaaggg ctatcataca acattcagtc agctgaagat ggattggtag 300
aggtgtgtct atacataaac ttcagtcatt tttgcttgtg cagaatcatc ccaatcttcc 360
caanactgaa tgggcagtcc tgtggctttc ttccttttcc atattcccaa caaggctacg 420
tgaagttcaa ctcttgatga gccgcttaca acagcagttc cttaggancc caacatgaca 480
ggtgggtcag atttccctat gagaaacaaa actggncacc tacagcaaaa tntcaaaatg 540
ggtaagtcct tccttcctct tcctcctgat tatntacaac atatctcctt tcaagantat 600
tatttccatc atgcttattc cttcccaaat ctaaaccttg aaggtgattt gaagggaaac 660
cnccatccnn aaaaagaaaa acccattccc aaattgaaaa aaaactnggc agggtataca 720
atacaccccc canaaactcn ccaattttcc c 751

<210> 646
<211> 760
<212> DNA

<213> Homo Sapiens

<400> 646
cctacatcag ttttatttaa aacacaaaca agtatttctc tttctgtaag ggcaaatggt 60
tcaaataatg cggaacacga aacattgact aatacaagtg ctttaaatat gaaacaaaat 120
tatttttaa aaaagcaaaa gaataaagaa tatatacaaa agggacctgg aatctgtaag 180
gtgattccaa aaacnaaata agtagaaaat ccatggtgaa acctgaacat tctacctctg 240
ctttggagaa gggctatcat acaacattca gtcagctgaa natggattgg tagaggtgtg 300
tctatacata aacttcagtc atttttgctt gtgcanaatc atcccaatct tcccaanact 360
gaatgggcag tcctgtggct ttcttccttt tccatattcc caacaaggct acgtgaagtt 420
caactcttga tgagccgctt acaacagcag ttccttagga gccaacatga caggtgggtc 480
aaatttccct atganaaaca aaactggcca cctacagcaa aatatcaaaa tgggtaantc 540
cttccttcct cttcctcctg attatataca acatatctcc tttcaagact attattccat 600
catgcttatt ccttcacaaa tctaaacctt gaagtgatat gaangaaacc nccntccaga 660
aaagaaaact cnantcanaa atgaaaaaaa ctggcaggta tncaatacac cccaaaacnt 720
ctcaatntcc tggcacanta caatccattg ttctgctaca 760

<210> 647
<211> 1041
<212> DNA
<213> Homo Sapiens

<400> 647
caaaggcgac agctgcccat tccgtcactg tgaagctgca ataggaaatg aaactgtttg 60
cacattatgg caagaagggc gctgttttcg acaggtgtgc aggtttcggc acatggagat 120
tgataaaaaa cgcagtgaaa ttccttgtta ttgggaaaat cagccaacag gatgtcaaaa 180
attaaactgc gctttccatc acaatagagg acgatatgtt gatggccttt tcctacctcc 240
gagcaaaact gtgttgccca ctgtgcctga gtcaccagaa gaggaagtga aggctagcca 300
actttcagtt cagcagaaca aattgtctgt ccagtccaat ccttcccctc agctgcggag 360
cgttatgaaa gtagaaagtt ccgaaaatgt tcctagcccc acgcatccac cagttgtaat 420
taatgctgca gatgatgatg aagatgatga tgatcagttt tctgaggaag gtgatgaaac 480
caaaacacct accctgcaac caactcctga agttcacaat ggattacgag tgacttctgt 540
ccggaaacct gcagtcaata taaagcaagg tgaatgtttg aattttggaa taaaaactct 600
tgaggaaatt aagtcaaaga aaatgaagga aaaatctaag aagcaaggtg agggttcttc 660
aggagtttcc aagtctttta ctccaccctg agcccgttcc aagtcctgaa aaagaaaatg 720
tcaggactgt ggtgaaggac agtaactctc tccaacaaac aanggagaaa gaanccttgg 780
gtagattgag tcctactgan agacggggga aacgaaaant tcagcaagcg gtgacaagtg 840
atcctccaat aaagcgttac cctgcacaaa ggctagggaa aaaaanttaa ancccanaaa 900
actaacattg acaaaaccac caaagaaagc tcaagnttcc aagtccccta agggaccgan 960
taagcatgtc aaccggatca anataatgng gntgcaacag ttaaagntta aaaaattggg 1020
gaaattcagt taaaacattt g 1041

<210> 648
<211> 810
<212> DNA
<213> Homo Sapiens

<400> 648
ccctacatca gttttattta aaacacaaac aantatttct ctttctgtaa gggcaaatgg 60
ttcaaataat gcggaacacn aaacattgac taatacaant gctttaaata tgaaacaaaa 120
ttatttttta aaaaagcaaa agaataaana atatatacaa aagggacctg naatctgtaa 180
gctgattcca aaaacnaaat aantanaaaa tccatggtga aacctgaaca ttctacctct 240
gctttggana agggctatca tacaacattc antcagctga aaatggattg gtaaaggtgt 300
gtctatacat aaacttcant cattttgct tgtgcaaaat catcccaatc ttcccaaaac 360
tgaatgggca gtcctgtggc tttcttcctt ttccatattc ccaacaaggc tacntgaant 420

tcaactcttg atnagccgct tacaacagca gttccttagg agccaacatg acaggtgggt 480
caaatttccc tatgaanaaa caaaactggc cacctacagc aaaatatcaa aatgggtaag 540
tccttccttc ctcttcctcc tgattatata caacatatct cctttcaaga ctattatttc 600
catcatgctt attccttcac aaatctaaac cttgaggtga tatgaaggaa accancatca 660
agaaaagaaa accaattcan aaatgaanaa aactggcagg tntacaatac accccananc 720
atctcaatat ccctggcaca gttacaattc agtgttctgc tacagcccat aaaataaata 780
ttggcagctt gaataancnc atttttttccc 810

<210> 649
<211> 656
<212> DNA
<213> Homo Sapiens

<400> 649
cccnacatca ntttttattta aaacacaaac aattatttct cttnctgtaa gggcaaatgg 60
ttcaaataat gcgnaacaca aaacnttgac taatacaatt gctttaaata tnaaacaaaa 120
ttatttttta aaaaancaaa aaaataaaaa atatntacaa aagggacctg aaatctgtaa 180
nctnatncca aaaacaaaat aattaaaaaa tccatggtna aacctnaacn tnctacctct 240
gcttnggaaa agggctatca tacaacntnc antcanctna aaatggatng gtaaaggtnt 300
ntctatacat aaacttcant cattttngct tgtgcaaaat cancccaatc tncccaaaac 360
tnaatgggca ntcctgtggc ttnctncctt tnccatatnc ccaacaaggc tacttnaatt 420
tcaactcttn ataanccgct tacaacagca ntnccttagn anccaacatn acaggtgggt 480
caaattcccc tataaaaaac aaaactggcc ncctacanca aaatatcaaa atgggtaatt 540
ccttcctncc tctnccncct nattatatac aacatttctc ctttcaaaac tattattncc 600
atcatgcttn ttcctncaca aatctaaacc ttgangtgat ttgaaggaac cacctc 656

<210> 650
<211> 645
<212> DNA
<213> Homo Sapiens

<400> 650
gaacttcccn acnncatttt tatttaaaac ncaaacaatt nttncncttn ctntangggc 60
aantggtnca aatantgcgn aacncaaaac tttnactaat acaattgctt taaatntaaa 120
ncaaanttat tttttaaaaa accaaaaaaa taaaaaatnt ttccaaangg gacctgaaan 180
ctntaaccta atcccaaaaa caaaataatt aaaaannccn nggtnaancc tnaacntnct 240
nccnctnctt tgnaaaaggg ctatcanaca acntncattc ncctaaaaat gnatnggtaa 300
aggtttttct anacataaac ttcattcatt ttggcttntn caaaancacc ccaanctncc 360
caaaactnaa tgggcnncct ntggcttnct ccctttccca tntncccaac aaggctactt 420
naattncaac ncttnataac ccccttacaa caccattncc ttagnaccaa cataacaggt 480
gggtcaaatt ncccnataaa aaacaaanct ggccccctncc ccaaaatncc caaatgggta 540
ttcctncctn ccctcccccc ngnatatata caacatntcc cctttcanaa atatattccc 600
ccacgcttat tccncccaaa nntaancctt gaagttattt aagga 645

<210> 651
<211> 780
<212> DNA
<213> Homo Sapiens

<400> 651
ccttgacctc ccaaagtgct gagattacag gcctgagcca ctgcaccttg ccttccttac 60
ctcttttctc cgacattttt atgtttctaa cattgaactc taaggaagct ggtgaacaaa 120
cacgccatat gtatgcagaa cacttaacag aattatgcta tgttgtctgt ttttgtttgt 180
atttcttgtc cttgctgaag attgacttga aatcttaaac taagttctcc ctctttatag 240
gcggtgacag tgatcctcca ttaaagcgta gcctggcaca gaggctaggg aagaaagttg 300

aagctccaga aactaacatt gacaaaacac caaagaaagc tcaagtttcc aagtctctta 360
aggagcgatt aggcatgtca gctgatccag ataatgagga tgcaacagat aaagttaata 420
aagttggtga gatccatgtg aagacattag aagaaattct tcttgaaaga gccagtcaga 480
aacgtggaga attgcaaact aaactcaaga cagaaggacc ttcaaaaact gatgattcta 540
cttcaggagc aagaagctcc tccactatcc gtatcaaaac cttctctgag gtcctggctg 600
aaaaaaaaca tcngcagcag ggaactgaag agacaaaaaa gccnaaagga tacaacttgc 660
atcaagctaa agattgatag tgaaattaaa aaaaacagta attttngcca cccattgttg 720
ccngcagaag acaatcanaa gaacctgcag gtaaaacaaa ntctatgcag ggaggtgccc 780

<210> 652
<211> 518
<212> DNA
<213> Homo Sapiens

<400> 652
gnacttncct acatcatttt tatttaaaac acaaacaatt ntttcncttt ctgtangggc 60
aaatggttca aataatgcgg aacacaaaac nttnactaat acaattgctt taaatntnaa 120
acaaaattat tttttaaaaa ancaaaaaaa taaaaaatnt ttncaaangg gacctgaaat 180
ctntaanctn atnccaaaaa caaaataatt naaaaatcca nggtgaaacc tnaacntnct 240
nccnctgctt tggaaaaggg ctntcataca acnttcattc ncctaaaaat ggattggtaa 300
angttttttnt atacataaac tncattcatt tttgcttntg caaaatcanc ccaanctncc 360
caaaactnaa tgggcantcc tntggctttc tnccttccc anatncccaa caaggctact 420
tnaatttcaa cncttnataa nccgcttaca acancatttc cttaggancc aacatnacgg 480
tgggtcaaat cccctataaa aaacaaaact ggccncct 518

<210> 653
<211> 490
<212> DNA
<213> Homo Sapiens

<400> 653
gttaataaag ttggtgagat ccatgtgaag acattagaag aaattcttct tgaaagagcc 60
agtcagaaac gtggagaatt gcaaactaaa ctcaagacag aaggaccttc aaaaactgat 120
gattctactt caggagcaag aagctcctcc actatccgta tcaaaacctt ctctgaggtc 180
ctggctgaaa aaaaacatcg gcagcaggaa gcagagagac aaaaaagcaa aaaggataca 240
acttgcatca agctaaagat tgatagtgaa attaaaaaaa cagtagtttt gccacccatt 300
gttgccagca gaggacaatc agaggagcct gcaggtaaaa caaagtctat gcagggaggt 360
gcacatcaag acgctggaag aaattaaact ggagaaggca ctgagggtgc agcagagctc 420
tgagagcagc accagctccc cgtctcaaca cnaggccact ccaagggcaa ggcggctgct 480
gcnaatcccc 490

<210> 654
<211> 359
<212> DNA
<213> Homo Sapiens

<400> 654
cccanctccn ttttanttna aancccaacc aattnttccc cttccgntan gggcaatngn 60
tccaattatn ncgaacncca aaccttnaan natnccaatt ncttaaatnt taaaccaaat 120
tnnttttta aaaagccaaa naattaagaa ttttttccaa agggaacnng aatccnttag 180
ggtaatccca aaaccaaatt agttaaaaat ccctggntaa acccnaacnt tccnccnccn 240
ccttggaaaa agggnnnccn ncnaccttcc atncncntaa aaatgaatgg ntaaagnttt 300
ttcnnncctt aacntccatc ctttttgnct nttccaaanc ctccccancc tccccaaaa 359

<210> 655

<211> 611
<212> DNA
<213> Homo Sapiens

<400> 655
tgaaaaaaaa catcggcagc aggaancaga aagacnaaaa agcaaaaagg atactacttg 60
catcangcta angattgata gtgaaattaa aaaaacagta tttttgccac ccattgttgc 120
cancagagga caatcanagg agcctgcagg taaaannaag tctatgcagg aggtgcacat 180
caagacgctg gaagaaatta aactggagaa ggcactgagg gtgcagcana gctctgagag 240
cagcaccagc tccccgtctc aacacnaagc cactccatgg gcnangcggc tgctgcgant 300
cnccnaaaga ncagggatga angaagagaa gaaccttcag gaaggaaatg aatttgattc 360
tcagancatt attataactg aagctnnana ngcttcnggt gagaccacng ganttgacat 420
cactaaaatt ccagtcaaga gatgtgagac catgagagag aagcacatgc acaaaacanc 480
nngagaggga aaaatcagtc ttgacacctc ttcggggaga tgtagcatct tgcggnaccc 540
aantggcaga gaaaccagtg ctcactgctg tgccaggaat cacncggcac ctgaccaagc 600
ggcttcccac a 611

<210> 656
<211> 634
<212> DNA
<213> Homo Sapiens

<400> 656
ccnacatcag ttttatttaa aacacaaaca agtntttcnc tttctgtnag ggcaaatggt 60
tcaaataatg cggaacacna aacattgact aatacaantn ctttaaatat gaaacaaaat 120
tatttttaa aaaancnaaa naataaagaa tatntncaaa agggacctgg aatctgtnag 180
ctgattccaa aaacnaaata anttnaaaat ccntggtgaa acctgaacat tctacctctg 240
ctttggaaaa gggntatcat acaacattca gtcngctgaa aatggattgg taaaagtntn 300
tctatacata aacttcagtc atttttgctt gtncaaaatc atcccaatct tcccaaaant 360
gaatgggcag tcctgtggct ttcttccttt tccatattcc caacaaggnt acntnaantt 420
caactcttga nnanccgctt acaacagcag ttccttagga nccccatgac aggtgggtcn 480
aatttcccta tnaaaaacaa aactgggccc tacagcaaaa tatccaaatg ggtnagtcct 540
tccttcctct tcccctgant atatacacat atctcctttc aanaatanta tttccccatg 600
cttattcctt cccnaatcta aaccttgaag tgat 634

<210> 657
<211> 958
<212> DNA
<213> Homo Sapiens

<400> 657
gaaagaaaag catcatgtaa aaatgaaagc caagagatgt gccactcctg taatcatcga 60
tgaaattcta ccctctaaga aaatgaaagt ttctaacaac aaaaagaagc cagaggaaga 120
aggcagtgct catcaagata ctgctgaaaa gaatgcatct tccccagaga aagccaaggg 180
tagacatact gtgccttgta tgccacctgc aaagcagaag tttctaaaaa gtactgagga 240
gcaagagctg gagaagagta tgaaaatgca gcaagaggtg gtggagatgc ggaaaaagaa 300
tgaagaattc aagaaacttg ctctggctgg aatagggcaa cctgtgaaga aatcagtgag 360
ccaggtcacc aaatcagttg acttccactt ccgcacagat gagcgaatca aacaacatcc 420
taagaaccag gaggaatata aggaagtgaa ctttacatct gaactacgaa agcatccttc 480
atctcctgcc cgagtgacta agggatgtac cattgttaag cctttcaacc tgtcccaagg 540
aaagaaaaga acatttgatg aaacagtttc tacatatgtg ccccttgcac agcaagttga 600
agacttccat aaacgaaccc ctaacagata tcatttgagg agcaagaagg atgatattaa 660
cctgttaccc tccaaatctt ctgtgaccaa gatttgcaga gacccacagg actcctgtac 720
tgcaaacaan acaccgtgca cgggctgtga cctgcaaaaa gtacagcaga gctggaggct 780
gaggagctnc gagaaattgc aaccantaca anttccaaag cacgtngaac cttgattccc 840

agaataactt gangggtggg cccaaccttg cccaagaaaa ccaccngtga aancaancca 900
acggagccct antnggcttt gatttgggaa tttgggaaan gaatncaagg gaggngag 958

<210> 658
<211> 816
<212> DNA
<213> Homo Sapiens

<400> 658
gggagggaaa gacaaaacgt atttattcca ggccaggtct taaaatgcac actgcacggt 60
tccctgttgt tatcagcacc agtaaggaaa gaacgtgcct taacggcagc cccacccaga 120
gcctgctgcg tggctgctgt gaggctcccc atgaatccac gcagtcttct tcctcactgg 180
tgcagttggt gaggttttct accctcacag caaagggatc cttaactata aattcacggt 240
atgcagagaa gaggacagaa tctgatttac tgattgttcc tcatttaaac catgacttaa 300
tctctatctt aggatttaac tatctttatt ttctggttaa aatttttaaa aaaagtgggg 360
agagggtgag agtcgtaagg ggcaatagca atagagatta cactgtgctg acacagagac 420
taaattctag tcagagtgaa gaccatataa aaggccggct gatggtttaa aggaagtaac 480
tacatggagt ctaatcgaga cattcatgan ttacatctca ttattagcct tagtaatgta 540
agaaaacaat tctcaacaaa actgggagtc cacagttgtc aagtatgctt tctcangcac 600
gggtaggtaa aagtctggan aaatgggttc tctccatgcc caatgacaaa gcaagacggt 660
cctaggtttg aagttaaaaa caggtcccaa ttgcccgggc ggtatccgcc agctcacagc 720
tgaatttaan catggaaatc caatggaaaa attggganat acnggcacat tcanaaggct 780
ggtcctttga cttatctcca naacccgggt actggc 816

<210> 659
<211> 726
<212> DNA
<213> Homo Sapiens

<400> 659
tgagaaaagt ggtacaaata ctgggaaaaa cctgctcttc tgcgttaagt gggagacaat 60
gtcacaagtt aaaagctctt attcctatga tgccccctcg gatttcatca atttttcatc 120
cttggatgat gaaggagata ctcaaaacat agattcatgg tttgaggaga aggccaattt 180
ggagaataag ttactgggga agaatggaac tggagggctt tttcagggca aaactccttt 240
gagaaaggct aatcttcagc aagctattgt cacacctttg aaaccagttg acaacactta 300
ctacaaagag gcagaaaaag aaaatcttgt ggaacaatcc attccgtcaa atgcttgttc 360
ttccctggaa gttgaggcag ccatatcaag aaaaactcca gcccagcctc agagaagatc 420
tcttaggctt tctgctcaga aggatttgga acagaaagaa aagcatcatg taaaaatgaa 480
agccaagaga tgtgccactc ctgtaatcat cgatgaaatt ctaccctcta agaaaatgaa 540
agtttctaac ancacaaaga agccagagga agaaggcagt gctcatcaag atactgctga 600
aaagaatgca tcttccccaa gagaaagcca agggtagaca tactgtgcct tgtatgccac 660
ctgcanagca gaagtttcna aaangtactg angagcaang aatctggaga agagtatgaa 720
aaatgc 726

<210> 660
<211> 824
<212> DNA
<213> Homo Sapiens

<400> 660
aggatttaac tatctttatt ttctggttaa aatttttaaa aaaagtgggg agagggtgag 60
agtcgtaagg ggcaatagca atagagatta cactgtgctg acacagagac taaattctag 120
tcagagtgaa nacccatata aaaggccggc tgatggttta aaggaagtaa ctacatggag 180
tctaatcgag acattcatga gttacatctc attattagcc ttagtaatgt aagaaaacaa 240
ttctcaacaa aactggagtc cacagttgtc aagtatgctt tctcaggcac gggtaggtaa 300

aagtctggan aaatgggttc tctccatgcc caatgacaaa gcaagacggt cctaggtttg 360
aggttaagan caggtcccat tgccgggcgg tatccgcagc tcacagctga ntttagcagt 420
ggaatcgagt ggagaatttg gggagataca ggcncagtca gaggctggtc acttgacttt 480
atctccagac cctggtactt gcgtattgga tttgccttat gcaccagttc tctccgtagc 540
ctggccanct cctcttttt ctgctcttcc tcctgtagtc tggcctcctc caactgctgg 600
gctttctggg cttctacctc agccattctc ttctccagct ccctgccgct ctttggctct 660
ctctcagtag cccactgaaa angtccctga acnaaaaaaa ccanaaannng gccctcacaa 720
ctgatttcnt ctctttcttg gggaaccaag ggcccctgaa aaaanaaacg gtgtttggaa 780
caaaccntga aacaagcngc ctccttctgc ctgtcccaat tcct 824

<210> 661
<211> 399
<212> DNA
<213> Homo Sapiens

<400> 661
ggtttgnagg gaaaaanaaa actttttttt cccagnccag ttcttaaant nccccnngcn 60
nggtcccctn tnttttcnc ccccattaag gaaaaaactt gcntnancgg nagccccccc 120
caaaacctnc tgcttggctg ctttaaggnc cccataannc ccccccatnnt cctcccccac 180
tggtncattg gtnaggtttc ctcccccccn ccaaaggnnt ccttacntat aaatcccngg 240
tttncaaaaa aaaananaaa accaatttcn gatnntcccc cttnaancca gnacttaatc 300
cctntctnag gattnaacaa cctttttttn cgggttaaaa tttttaaaaa aattngggaa 360
anggttaaat ccttaggggg aatnccnata aaaattacc 399

<210> 662
<211> 826
<212> DNA
<213> Homo Sapiens

<400> 662
gtcaaatgct tgttcttccc tggaagttga ggcagccata tcaagaaaaa ctccagccca 60
gcctcagaga agatctctta ggctttctgc tcagaaggat ttggaacaga aagaaaagca 120
tcatgtaaaa atgaaagcca agagatgtgc cactcctgta atcatcgatg aaattctacc 180
ctctaagaaa atgaaagttt ctaacaacaa aaagaagcca gaggaagaag gcagtgctca 240
tcaagatact gctgaaaaga atgcatcttc cccagagaaa gccaagggta gacatactgt 300
gccttgtatg ccacctgcaa agcagaagtt tctaaaaagt actgaggagc aagagctgga 360
gaagagtatg aaaatgcagc aagaggtggt ggagatgcgg aaaaagaatg aagaattcaa 420
gaaacttgct ctggctggaa tagggcaacc tgtgaagaaa tcagtgagcc aggtcaccaa 480
atcagttgac ttccacttcc gcacagatga gcgaatcnaa caacatccta ngaaccagga 540
ggaatataag ggaagtgaac tttacatctg aactacgaaa gcatccttca tctcctgccc 600
gaantgacta aggggatgtt ccattgttaa gcctttcaac ctgtcccngg gaaagaanag 660
aacntttgat gaaacagttt ctacatatgt gcccccttgcc cngcaagttg aagacttccn 720
taancgaacc ctnactgatt tcttttgang aaccagaang gntgattttn ccctgtttcc 780
ctccaatctt ctgtgaacaa gatttggccg aanacccccg aacccc 826

<210> 663
<211> 770
<212> DNA
<213> Homo Sapiens

<400> 663
gggaaagaca aaacgtattt attccaggcc aggtcttaaa atgcacactg cacggttccc 60
tgttgttatc agcaccagta aggaaagaac gtgccttaac ggcagcccca cccanagcct 120
gctgcgtggc tgctgtgagg ctccccatga atccacgcag tcttcttcct cactggtgca 180
gttggtgagg ttttctaccc tcacagcaaa gggatcctta actataaatt cacggtatgc 240

anagaanagg acagaatctg atttactgat tgttcctcat ttaaaccatg acttaatctc 300
tatcttagga tttaactatc tttatttttct ggttaaaatt tttaaaaaaa gtggggagag 360
ggtgagagtc gtaaggggca atagcaatag agattacact gtgctgacac agagactaaa 420
ttctagtcag agtgaagacc catataaaag gccggctgat ggtttaaagg aagtaactac 480
atggagtcta atcgagacat tcatgagttn catctcatta ttagccttag taatgtaaga 540
aaacnattct caacaaaact ggagtccaca gttgtcaant ntgctttctc aggcacgggt 600
aggtnaaaat ctgganaaat gggttctctc catgcccaat gacaancaan anggtcctag 660
gtttgaagtt aaaaacangt cccattgccg gcggtatccg cagctcacag ctgaatttac 720
cngtggaatc aantggaaaa tttgggaaaa tacnggccca atcaaaaggt 770

<210> 664
<211> 593
<212> DNA
<213> Homo Sapiens

<400> 664
gaaganctga gcagcacagc actggtgaag aagagctgcc tggcggagct cctccggctt 60
tacaccaaaa gcagcagctc tgatgaggag tacatttata tgaacaaagt gaccatcaac 120
aagcaacaga atgcagagtc tcaaggcaaa gcgcctgagg agcagggcct gctacccaat 180
ggggagccca gccagcactc ctcggcccct cagaagagcc ttccagacct cccgccaccc 240
aagatgattc cagaacggaa acagcttgcc atcccaaaga cggagtctcc agagggctac 300
tatgaagagg ctgagccata tgacacatcc ctcaatgagg acggagaggc tgtgagcagc 360
tcctacgagt cctacgatga anaggacggc agcaagggca agtcggcccc ttaccantgg 420
ncctcgccgg aggccggcat cganctgatg cgtgacgccc gcntctgcgc cttcctgtgg 480
cgcaagaaag tggctgggac agtgggccaa gcagctctgt gtcatcnagg acaacaggct 540
tctgtgctnc naatcctcca aggaccccng ccctcagctg gacgtgaacc tac 593

<210> 665
<211> 1024
<212> DNA
<213> Homo Sapiens

<400> 665
aagagattga agcaaatgaa tggaagaaga aatacgaaga gacccggcaa gaagttttgg 60
agatgaggaa aattgtagct gaatatgaaa agactattgc tcaaatgatt gaagatgaac 120
aaaggacaag tatgacctct cagaagagct tccagcaact gaccatggag aaggaacagg 180
ccctggctga ccttaactct gtggaaaggt ccctttctga tctcttcagg agatatgaga 240
acctgaaagg tgttctggaa gggttcaaga agaatgaaga agccttgaag aaatgtgctc 300
aggattactt agccagagtt aaacaagagg agcagcgata ccaggccctg aaaatccacg 360
cagaagagaa actggacaaa gccaatgaag agattgctca ggttcgaaca aaagcaaagg 420
ctgagagtgc agctctccat gctggactcc gcaaagagca gatgaaggtg gagtccctgg 480
aaagggccct gcagcagaag aaccaagaaa ttgaaggaac tgacaaaaat ctgtgatgag 540
ctgattgcaa agctgggaaa gactgactga gacactcccc ctgttagctc aacagatctg 600
catttggctg cttctcttgt gaccacaatt atcttgcctt atccaggaat aattgccccc 660
ttgcaganga aaaaaatata cttaanaaaa gcacatgcct actgctgcct gtcccgcttt 720
gctgccaatg caacagccct ggaagaaaac cctatanggn tgcatagtct aaaaagggag 780
ttgtngactn gacagtgctg ggagcctnct agtttccccc cnatgaaagg ttcccttagg 840
ctgctgagtt tggggtttgt gatttaacct taagtttgtt ttaaagtcca ncttaacttt 900
cccaaattgt gtttaaaatt tgtaacnccc cctttggggt cttcccaaca accggtccga 960
ttttttggn gatcggttta acccttttaa ttttttagta nccagtgggg tttaatttag 1020
ggga 1024

<210> 666
<211> 734
<212> DNA

<213> Homo Sapiens

<400> 666
gagacaagat cttgctgtca cccaggatgg agtgcagtgg catgatcatg gctcactgca 60
gccttgacct cccaggctcc cacctcagcc tcccaagtag ctgggaccac aggcacgtgc 120
caccatgccc agctaatttt tattttggta nanacaaggt ttcaccatgt tgcctaggta 180
ggtttcaaac tcctggactc aagtgatcct cctgcctcgg ccttccacag tgttgggatt 240
acaggaataa gccactgtgc ccggcccttt ttctcttctg taacagantt tattactgcc 300
tagctagcag gttatttggc cctcacatgt gttgaggcaa actctatact atattcttac 360
tctccanagt tccaaaatcc tttatttta aanaaaaata aacaaacata cttcattctg 420
cccagtatat tctcttgatc tgtacaagct acgattttaa ttctctttgg gagaggaagc 480
atctgttaag ttcgaatggg ggatatttcc tcataacggt catggctgan aagccaggac 540
aattatcact taacgaaggt cctttggtgc tccctgtgca tcagcttcat tcactggggt 600
caggttctta aggggtctct tccaccaatg tgctagggaa gggctgccat cacctctgtt 660
taacacatag ctactttctt aaaccnataa gcttaaaaaa gangactatg gaattaccaa 720
tggaaggcnt ataa 734

<210> 667
<211> 592
<212> DNA
<213> Homo Sapiens

<400> 667
gttatgaana cctttccaaa ttcatttgta tttctgttaa atttatttt tacttttaga 60
gtggctatca ttataatgta atttaaaatt atatttgtaa aagtgactat tggagtgagt 120
acgaattttg tttatanatc tatgataaat gcattctccc tntaggaggt agaanagtat 180
acagctgtnt ataataagct tcgctatgaa catacatttc tcaagtcaga atttgaacac 240
cagaaggaag agtatgcacg tnttttagat gaangaaacn ataaactatg aatcagagat 300
ngcaanactg gaggaagatn aagaagaact acgtanccag ctgcttaatg tngatctcac 360
anaagacagc aaacgagtgg aacaacttgc tcgagaaaaa gtctatttgt gtccaaaatt 420
aagangttta gaggctgaag taccngaatt aaaggctgaa naggagaatt ctgangctca 480
ggtggaaaat gcccaaanaa tacacgtgcg gcagttggct gagatgcacg ctacagtcag 540
atccctggag gctgacaanc aatcanctaa tttacgggca naacgcttgg aa 592

<210> 668
<211> 373
<212> DNA
<213> Homo Sapiens

<400> 668
aaaaaaaaat taagctcttt aattatgtgc acacagattt tagaaaaggt agccttttgt 60
atatanatac ctttacattc tttaggntga nttttaaatt gtcatctttt ttcaactaca 120
gtttttgtnt atagtaaacc anaanatgtg tntggaccct gttatggnca agcatctcaa 180
agatgaagan agaattaatg atagttatat ttcactcaaa atgccaaaaa aaaaaattca 240
acaaagtaaa aattttaaaa cttgactcta actagttcct ttttgtttta cattctcaaa 300
ccattgtnaa atattctaaa tatctctgaa aatttctctt ttaatgcttc acttgtntaa 360
tcttaaaatc ctg 373

<210> 669
<211> 661
<212> DNA
<213> Homo Sapiens

<400> 669
cacacctggt ggtcctgaag acagcccagg acccagggat ctcccccagc cagagtctgt 60

gtgcggaaag ttccagaggc ctcagtgcag gctccctgtc ggagagtgca gttgggcccg 120
tggaggcatg ctgcctggtc atcctggctg cagagagcaa ggtcgctgcg gaggagcttt 180
gctgtctgct aggccaggtc ttccaggttg tttacacgga gtccaccatc gactttctgg 240
acagagcgat atttgatggg gcctctaccc cgacccacca cctgtccctg cacagcgatg 300
actcttctac aaaagtggac attaaggaga cctacgaggt ggaagccagc actttctgct 360
tccctgaatc tgtggatgtg ggtggtgcat caccccacag caagaccatc agtgagagcg 420
agctgagcgc cagcgccact gagctgctgc aggactacat gctgacgctg cgcaccaagc 480
tgtcatcaca ggagatccag cagtttgcag cactgctgca cgagtaccgc aatggggcct 540
ctatccacga nttctgcatc aacctgcggc agctctacgg ggacagccgc aagttcctgc 600
tgcttggtct gaagcccttc atccctgaaa angacagcca gcacttcnag aacttcctgg 660
a 661

<210> 670
<211> 401
<212> DNA
<213> Homo Sapiens

<400> 670
aaattattca cattgcagta aacttctttt taaggtctct gaaagttaca ataggaacat 60
catgtgcaaa actgacagcc gtccaagggc ccagccgaca ggactggctc tccctgcccg 120
ctcggccggg ccctccccga gcggggacac actgcagggc ttggctgaac cctggtggac 180
aaggcaaana nccttccacc ccgcactgag gctcgtgtcc ctcggcagct ccctgctcct 240
tcacagtaaa ngacctgggc cgcccggggc catctgcacc gggcgcctct ccctggccac 300
caccaagggc tgacacgcag gtctgggcag ctccttctgg gaaggcctat gacgactgcg 360
ccgaaggtgt gggtgccccc ccatccactg tccatcatgc c 401

<210> 671
<211> 1347
<212> DNA
<213> Homo Sapiens

<400> 671
aagatcagcg atatcacgcg tcccccggag catcgcgtgc aggagccatg gcgcgggagc 60
tataccacga agagttcgcc cgggcgggca agcaggcggg gctgcaggtc tggaggattg 120
agaagctgga gctggtgccc gtgccccaga gcgctcacgg cgacttctac gtcggggatg 180
cctacctggt gctgcacacg gccaagacga gccgaggctt cacctaccac ctgcacttct 240
ggctcggaaa ggagtgttcc caggatgaaa gcacagctgc tgccatcttc actgttcaga 300
tggatgacta tttgggtggc aagccagtgc agaatagaga acttcaagga tatgagtcta 360
atgactttgt tagctatttc aaaggcggtc tgaaatacaa ggctggaggc gtggcatctg 420
gattaaatca tgttcttacg aacgacctga cagccaagan gctcctacat gtgaagggtc 480
gtanagtggt gagagccaca gaattcccct tagctgggac agtttcaaca agggtgactg 540
cttcatcatt gaccttggca ccgaaattta tcanttggtg tggttcctcn tgcaacaaat 600
atgaacgtct gaaggcaaac caggtagcta ctggcattcg gtacaatgaa aggaaaggaa 660
ggtctgaact aattgtcgtg gaanaaggaa gtgaaccctc agaacttata aaggtcttag 720
gggaaaagcc agagcttcca gatggaggtg atgatgatga cattatanca gacataagta 780
acaggaaaat ggctaaacta tacatggttt cagatgcaag tggctccatg agagtgactg 840
tggtggcana agaaaacccc ttctcantgg caatgctgct gtctgaagaa tgctttattt 900
tggaccacgg ggctgccaaa caaattttcg tatggaaagg taaagatgct aatccccaag 960
agaggaaggc tgcaatgaag acagctgaag aatttctaca gcaaatgaat tattccaaga 1020
atacccaaat tcaagttctt ccagaaggag gtgaaacacc aatcttcaaa cagtttttta 1080
aggactggag agatnaacga tcagagtgat ggcttcggga aagtttatgt cacagagaaa 1140
gtggctcaan tnnaacnaat tccctttgat gcctcnnaat tacncagttc tccgcagatg 1200
gcagcccagc acaatatggt ggatgatggt tctggccaag tggaaatttg gcgtgtncaa 1260
aacaatggta ggatccaagt tgaccnnaac tcctatggtg actcccatgg tggtgactgc 1320
tacttcatac tctacaccta tccctga 1347

<210> 672
<211> 3441
<212> DNA
<213> Homo Sapiens

<400> 672

atgtttctaa cattgaactc taaggaagct ggtgaacaaa cacgccatat gtatgcagaa 60
cacttaacag aattatgcta tgttgtctgt ttttgtttgt atttcttgtc cttgctgaag 120
attgacttga aatcttaaac taagttctcc ctctttatag gcggtgacag tgatcctcca 180
ttaaagcgta gcctggcaca gaggctaggg aagaaagttg aagctccaga aactaacatt 240
gacaaaacac caagaaaagc tcaagtttcc aagtctctta agggagcgat taggcatgtc 300
agctgatcca gataatgagg atgcaacaga taaagttaat aaagttggtg agatccatgt 360
gaagacatta gaagaaattc ttcttgaaag agccagtcag aaacgtggag aattgcaaac 420
taaactcaag acagaaggac cttcaaaaac tgatgattct acttcaggag caagaagctc 480
ctccactatc cgtatcaaaa ccttctctga ggtcctggct gaaaaaaaac atcggcagca 540
ggaagcagag agacaaaaaa gcaaaaagga tacaacttgc atcaagctaa agattgatag 600
tgaaattaaa aaaacagtag ttttgccacc cattgttgcc agcagaggac aatcagagga 660
gcctgcaggt aaaacaaagt ctatgcaggg aggtgcacat caagacgctg gaagaaatta 720
aactggagaa ggcactgagg gtgcagcaga gctctgagag cagcaccagc tccccgtctc 780
aacacgaggc cactccaagg gcaaggcggc tgctgcgaat ccccaaaaga acagggatga 840
aagaagagaa gaaccttcag gaaggaaatg aatttgattc tcagagcatt attataactg 900
aagctaaaga agcttcaggt gagaccacag gagttgacat cactaaaatt ccagtcaaga 960
gatgtgagac catgagagag aagcacatgc acaaaacaac aggagaggga aaaatcagtc 1020
ttgacacctc ttcggggaga tgtagcctct tgcaataccc aagtggcaga gaaaccagtg 1080
ctcactgctg tgccaggaat cacacggcac ctgaccaagc ggcttcccac aaagtcatcc 1140
cagaaggtgg aggtagaaac ctcagggatt ggagactcat tattgaatgt gaaatgtgca 1200
gcacagacct tggaaaaaag gggtaaagct aaacccaaag tgaacgtgaa gccatctgtg 1260
gttaaagttg tgtcatcccc caaattggcc ccaaaacgta aggcagtgga gatgcacgct 1320
gctgtcattg ccgctgtgaa ccactcagct ccagcagtgt cctacaggaa cccccagcca 1380
aaaaggcagc tgtggctgtt gtcccgcttg tctctgagga caaatcagtc actgtgcctg 1440
aagcagaaaa tcctagagac agtcttgtgc tgcctccaac ccagtcctct tcagattcct 1500
caccccccgga ggtgtctggc ccttcctcat cccaaatgag catgaaaact cgccgactca 1560
gctctgcctc aacaggaaag cccccactct ctgtggagga tgattttgag aaactaatat 1620
gggagatttc aggaggcaaa ttggaagctg agattgacct ggatcctggg aaagatgaag 1680
atgaccttct gcttgagcta tcagaaatga ttgatagctg aagggtggta gtgaggacac 1740
tttaaaaaaa aatcgccaaa aaactggact tagtttcatc tattgtaaca tttacctgag 1800
atgatcattt ctttagtcta gaatttgccc caaatcagaa gtatacctct gaattatctg 1860
tatgtgtcct ggattccttg gggtcagatt tttaaagtta ctttataacc attttgtcca 1920
tttgatgcca ttgtttatca tcttttgaga aaaaagttct gtcataccct tctctccaca 1980
aaaaagagac tgagagggag atcaagtgaa agggtgcaag cgaacttagt gactccttga 2040
ggtgtttgtc agttttggct tttttcttct ttgttgtatt ctttatgtat tgtcttgatg 2100
tacttaatat tacctgagtt tgaaatggat gaagacagct gctaccatta aggaccaaat 2160
tttatgctac cactaaacaa aaatacccac tcagtctgtg ttaaattgta tgtcttttta 2220
aaggtattta aagattcaac taagctttaa agagggctga gcagctcagg aagcctgtaa 2280
tgtgggcata actctttgga cctgatcttg atgcttctgc tgctctgtta gcctctgaag 2340
agcaatatct aatttattat tactgtaatt ttttaaaagg ctttaaagtg cctcaggggt 2400
cccctgaaac taattttcta tttctgggat tccctggatt cattatatga gatggtgaca 2460
tgattagagg aattcttttt tagtatgaaa attgtccctt ttcttcttca gtacttgcct 2520
ccttgctggc attgaattaa cacagggaca aaatttggtt aatttttttat ttctaactct 2580
cccaacaaac ccctgttgcc cagtatttgt ttggtggcct ttaaccacct gagggaaaaa 2640
atgagcttat tcaagctgcc aatatttatc tatgggctgt agcagtacac tgaattgtac 2700
tgtgccaggg atattgagat gctctggggg tgtattgtat acctgccagt tttcttcatt 2760
tctgaattga gttttctttt cttgatgttg gtttccttca tatcacctca aggtttagat 2820
ttgtgaagga ataagcatga tggaaataat agtcttgaaa ggagatatgt tgtatataat 2880
caggaggaag aggaaggaag gacttaccca ttttgatatt ttgctgtagg tggccagttt 2940

tgtttctcat agggaaatnt gacccacctg tcatgttggc tccctaagga actgctgttg 3000
taagcggctc atcaagagtt gaacttcacg tagccttgtt gggaatatgg aaaaggaaga 3060
aagccacagg actgcccatt cagttttggg aagattggga tgattttgca caagcaaaaa 3120
tgactgaagt ttatgtatag acacaccttt accaatccat nttcagctga ctgaatgttg 3180
tatgatagcc cttctccaaa gcagaggtag aatgttcagg tttcaccatg gattttctac 3240
ttatttcgtt tttggaatca ccttacagat tccaggtccc ttttgtatat attctttatt 3300
cttttgcttt tttaaaaaat aattttgttt catatttaaa gcacttgtat tagtcaatgt 3360
ttcgtgttcc gcattatttg aaccatttgc ccttacagaa agagaaatac ttgtttgtgt 3420
tttaaataaa actgatgtag g 3441

<210> 673
<211> 1016
<212> DNA
<213> Homo Sapiens

<400> 673
gtcaaatgct tgttcttccc tggaagttga ggcagccata tcaagaaaaa ctccagccca 60
gcctcagaga agatctctta ggctttctgc tcagaaggat ttggaacaga aagaaaagca 120
tcatgtaaaa atgaaagcca agagatgtgc cactcctgta atcatcgatg aaattctacc 180
ctctaagaaa atgaaagttt ctaacaacaa aaagaagcca gaggaagaag gcagtgctca 240
tcaagatact gctgaaaaga atgcatcttc cccagagaaa gccaagggta gacatactgt 300
gccttgtatg ccacctgcaa agcagaagtt tctaaaaagt actgaggagc aagagctgga 360
gaagagtatg aaaatgcagc aagaggtggt ggagatgcgg aaaaagaatg aagaattcaa 420
gaaacttgct ctggctggaa tagggcaacc tgtgaagaaa tcagtgagcc aggtcaccaa 480
atcagttgac ttccacttcc gcacagatga gcgaatcaaa caacatccta agaaccagga 540
ggaatataag gaagtgaact ttacatctga actacgaaag catccttcat ctcctgcccg 600
agtgactaag ggatgtacca ttgttaagcc tttcaacctg tcccaaggaa agaaaagaac 660
atttgatgaa acagtttcta catatgtgcc ncctgcaca gcaagttgaa gacttccata 720
aacgaacccc taacagatat catttgagga gcaagaagga tgatattaac ctgttaccct 780
ccaaatcttc tgtgaccaag atttgcagag acccacagac tcctgtactg caaaccaaac 840
accgtgcacg ggctgtgacc tgcaaaagtt acagcagagc tggaggctga ggagctcgag 900
aaattgcaac aatacaaatt caaagcacgt gaacttgatc ccagaatact tgaaggtggg 960
cccatcttgc ccaagaaacc acctgtgaaa ccacgccgag ccctatgcct cgtgcc 1016

<210> 674
<211> 1135
<212> DNA
<213> Homo Sapiens

<400> 674
aggaattggg acaggcagaa ggaggcngct tgtttcangg tttgttccaa acaccgtttn 60
ttttttcagg ggcccttggt tccccaagaa agagangaaa tcagttgtga gggccnnttt 120
ntggtttttt tngttcaggg acnttttcag tgggctactg agagagagcc aaagagcggc 180
agggagctgg agaagagaat ggctgaggta gaagcccaga aagcccagca gttggaggag 240
gccagactac aggaggaaga gcagaaaaaa gaggagntgg ccaggctacg gagagaactg 300
gtgcataagg caaatccaat acgcaagtac cagggtctgg agataaagtc aagtgaccag 360
cctctgactg ngcctgtatc tccccaaatt ctccactcga ttccactgct taaattcagc 420
tgtgagctgc ggataccgcc cggcaatggg acctgttttt aacttcaaac ctaggaccgt 480
cttgctttgt cattgggcat ggagagaacc catttntcca gacttttacc tacccgtgcc 540
tgagaaagca tacttgacaa ctgtggactc cagttttgtt gagaattgtt ttcttacatt 600
actaaggcta ataatgagat gtaactcatg aatgtctcga ttagactcca tgtagttact 660
tcctttaaac catcagccgg ccttttatat gggtcttcac tctgactaga atttagtctc 720
tgtgtcagca cagtgtaatc tctattgcta ttgcccctta cgactctcac cctctcccca 780
ctttttttaa aaattttaac cagaaaataa agatagttaa atcctaagat agagattaag 840
tcatggttta aatgaggaac aatcagtaaa tcagattctg tcctcttctc tgcataccgt 900

gaatttatag ttaaggatcc ctttgctgtg agggtagaaa acctcaccaa ctgcaccagt 960
gaggaagaag actgcgtgga ttcatgggga gcctcacagc agccacgcag caggctctgg 1020
gtggggctgc cgttaaggca cgttctttcc ttactggtgc tgataacaac agggaaccgt 1080
gcagtgtgca ttttaagacc tggcctggaa taaatacgtt ttgtctttcc ctccc 1135

<210> 675
<211> 1067
<212> DNA
<213> Homo Sapiens

<400> 675
attttaaaga aacttcacag agctgcttca gtcggggatt tgaagaagct gaaggaatac 60
cttcagatca agaaatatga tgtaaatatg caggacaaaa aatacagaac acctttgcac 120
ctagcctgtg ctaatggaca tacagatgtt gtacttttcc taattgagca acaatgcaaa 180
ataaatgtcc gggatagtga aaacaaatcc ccattgatta aggcagtaca gtgtcaaaat 240
gaggattgtg cctactattc ttctaaactt tggtgcagac ccagatctga gggatattcg 300
ttataatact gttcttcact atgctgtttg tggtcaaagt ttgtcattag ttgaaaaact 360
gcttgaatac gaagctgatc ttgaagcgaa aaataaggat gggtatactc cactattagt 420
tgccgttatt aacaataatc caaaaatggt aaaatttctt ctggagaaag gggctgatgt 480
gaatgcttca gataattatc aaagaacagc ccttattctt gctgtcagtg gtgaaccacc 540
atgtttagta aagcttcttc ttcagcaagg tgtggaatta tgttacgaag gtattgtgga 600
ttcacagctg aggaatatgt ttatttccat ggttttactg catagatacc cacaattcac 660
tgcgagccat ggaaagaaga aacatgctaa atagacacct tattcttggc actacatgtg 720
actaaaggaa gatatggaac ccatttctac aatttctttg ccgcttcctt gaattggaaa 780
aatgtacttt gaaagaaccg gttaagtgaa ctatgataat atttttgctg actacccagt 840
tgaagaaaaa gtttcgttaa ttggatggga ttttttttt tcacgttaga agaatgaatg 900
aagaaatttt aaaagataaa cattatattg tgaaccatca gctgaaaaga taaatttgtg 960
ttcaatatat aggagaaaaa atttgtgtca aaatgttgaa tggaataata atgagaaact 1020
gtgttaggca tgtattaaaa catttaaata aaataaaaat acatttc 1067

<210> 676
<211> 784
<212> DNA
<213> Homo Sapiens

<400> 676
aaaagaattc tacaagattg tggaattcac aatctagtat tgatcaaaaa ttggcaaatc 60
aaattaatga tcttagacaa actgtcattt ggatgggaga cagactcatg agcttagaac 120
atcgtttcca gttacaatgt gactggaata cgtcagattt ttgtattaca ccccaaattt 180
ataatgagtc tgagcatcac tgggacatgg ttagacgcca tctacaggga agagaagata 240
atctcacttt agacatttcc aaattaaaag aacaaatttt cgaagcatca aaagcccatt 300
taaatttggt gccaggaact gaggcaattg caggagttgc tgatggcctc gcaaatctta 360
accctgtcac ttgggttaag accattggaa gtactacgat tataaatctc atattaatcc 420
ttgtgtgcct gttttgtctg ttgttagtct gcaggtgtac ccaacagctc cgaagagaca 480
gcgaccatcg agaacgggcc atgatgacga tggcggtttt gtcgaaaaga aaaggggaa 540
atgtggggaa aagcaagaga gatcaaattg ttactgtgtc tgtgtagaaa gaagtagaca 600
tgggagactc cattttgtta tgtgttaaga aaaattcttc tgccttgaga ttctgttaat 660
ctatgacctt acccccaacc ccgtgctctc tgaaacgtgt gctgtgtcaa ctcagggttg 720
aatggattaa gggcggtgca ggatgtgctt tgttaaacag atgcttgaag gcagcatgct 780
cctt 784

<210> 677
<211> 1362
<212> DNA
<213> Homo Sapiens

<400> 677

ggcacgagct gggcattaat gaggatcatt ctgagggtga tgaaaaatct gagaaggaaa 60
ctattatggc tcaccagccg actgatgtgg agtccacttt attgcaagtt gcaaggaaca 120
agaatactgc catccgtgaa gaactcaacc agctgaaaaa tgaaaacaga atgttaaagg 180
acaggttgaa tgcattgggc ttttccctag agcagaggtt agacaattct gaaaaactgt 240
ttggctatca gtccctgagc ccagaaatca cccctggtaa ccagagcgat ggaggaggaa 300
ctctgacttc ttcagtggaa ggctctgccc ctggctcagt ggaggatctc ttgagtcagg 360
atgaaaatac actaatggac catcagcaca gtaactccat ggacaattta gacagtgagt 420
gcagtgaggt ctaccagccc ctcacatcga gcgatgatgc gctggatgca cacatctctc 480
tctcagagtc ggaaggcatc tctcagcata gagcgctccc ggaaggggag cagcgggaat 540
gccagtgaag tgtccgtggc tctgcctgac ttnacgcata caccagatgg nagagaacca 600
acacagtaca agtgagggac tccaggcaac cctgcaagag ctagctgatt tacagcagat 660
tacccaggaa ctgaatagtg aaaacgaaag gcttggagaa gagaaggtta ttctgatgga 720
gtctttatgt cagcagagcg ataagttgga acactttagt cgacagattg aatacttccg 780
ctctcttcta gatgagcatc acatttctta tgtcatagat gaagatgtaa aaagtgggcg 840
ctatatggma ttagagcaac gttacatgga cctcgctgag aatgcccgtt ttgaacggga 900
gcagcttctt ggtgtccagc agcatttaag caatactttg aaaatggcag aacaagacaa 960
taaggaagct caagaaatga taggggcact caaagaacgc agtcaccata tggagcgaat 1020
tattgagtct gagcagaaag gaaaagcagc cttggcagcc acgttagagg aatacaaagc 1080
cacagtggcc agtgaccaga tagagatgaa tcgcctgaag gctcagctgg agaatgacaa 1140
gcagaaagtg gcagagctgt attctatcca taactctgga gacacatctg atattcagga 1200
cctcctggag agtgtcaggc tggacaaaga aaaagcagag actttggcta gtagcttgca 1260
ggaagatctg gctcataccc gacatgatgc caatcgatta caggatgcca ttgctaggta 1320
gaggatgata ccgagcctcc aagaagagct agaacaaatt ga 1362

<210> 678
<211> 1771
<212> DNA
<213> Homo Sapiens

<400> 678

agccagcggc agcaggctga gctcccaggc tgacatctgg gcagggctga tgggcagctt 60
ctggccatct ggtgaccagg tgtgccgcaa gtwktwwkta tatgcacagc ccctttccta 120
ataacccaca ttctaggtta cgtagacacg ttaaactcct attctagaac atcgtgcttg 180
aatgcagacc cctcagccca caatcgggct ggctgggcct cctgtgagcc ctcattgcat 240
ccagtctgtg gggcagtgac cccgcttcca ctggtggctg gtcttcctca tggtgctatg 300
caggtgccaa acacagttat attctcaaag gtacaggtct tgtctggaca ttgttcaaac 360
caatagctac tgcgttaggc acacgggaga tccctattcc caaaaatagc tgttgagttc 420
tggcctgaga gcatctccag tgaccacctt taaataaggc tttggttcaa acagcatgga 480
cccagcacct ggggagggtg ggcacagggg gcatggaccc agtacctggg gagggcgggc 540
atggtggtag gagacaactc aaccactgag tcttggaggt cctgccttgg ccacggaggg 600
cagtggctgc cctcacaaga agagtgaaga cactttcttt aactctgtcc taggagaatt 660
atgtgttagt gactcagtga gtttaaatga cactgcctgg rctccctaaa gttgtttact 720
tttstcctat ttrctgcktt awtccttgct ctcaccatgc taatgtacag atgttgttta 780
gatttctatg cttattgaaa caatgtaact gtgggactaa cagaacagga gcgaccttgt 840
ccagcattgc tcgtaacaaa acaaaaatgt taactagaaa aactccttat gatgaagaaa 900
tctaaagcca gagctgggac tccaaacccc ttccagggtg gaagacaggt cgctgagtcc 960
aggcaagggg cccccgtaac tgcttcccgc cagaaagccc agccgcgtga gtkcagcagc 1020
agcaccccag ccctggcgtg gccgcaccac ggcctctaga tactcttcta gctcaggctg 1080
aacacgcctg gattgtgtcg gccgggacag ccccgtcagt gtggggcagc tgacccacgt 1140
ctgtgtgaac atgctcctcc aaactaggac ggtgaagggc ccagggcgct gggaactgcc 1200
aggcgctgac tctccttctg ggttctcacc agcaccggaa cccaccccag ccaatagtca 1260
ggaagtgccg cggccgagcc ttcatcaacc ctagtgagtt tcccacagaa ctgaatccct 1320
tttcccaaat tcagctgtgc atgagccctt tttgtttggt gccctggagc actagtgtag 1380
ttcaatattc tcttcagaag gaaaactcca gcagccaccg gcctgcagga tgtgtgctga 1440

gcccacatga cctgaatgga cgggtcatgt gggaggggcc ctggtgggag ctgtgggcca 1500
cacggctgag ttcttccaat acggaagccc cgagctggag gctcacacgc tgtggggcag 1560
cccagagttg ctggaagctt tacaggggtg cgtagctaat ggcgtcggtg tcgctcggtc 1620
gctgtggagg ggtaccccgc tattggggcg gctcctcccg gcatgctcag gtctcaaagt 1680
acttgtagat cgcgtcacat acagtatcac gttctgccag tcgggtcgtt cagtccgtac 1740
catttcatta atgtccagtg tggatttgat g 1771

<210> 679
<211> 1367
<212> DNA
<213> Homo Sapiens

<400> 679
ctagtggatc caaagaattc ggcacgagga aacaagagcc ctgaaagatg aaatagatgt 60
tcttagggct acctctgata aagcaaataa actggagtca acagttgaga tatatcgtca 120
gaagctacaa gatctgaatg accttcgcaa gcaggtgaaa actttacagg aaaccaacat 180
gatgtatatg cataatacag tcagcttaga agaagaatta aaaaaagcaa atgcagcacg 240
tacacaatta gaaacataca aaaggcaggt tcaagatctt catgttaaac tttcctccga 300
atccaagagg gcagacacac tagcgtttga aatgaagcgg cttgaagaaa aacatgaagc 360
tttacttaag gaaaaagaga gactaattga gcagcgtgat actttgaaag aaacaaatga 420
agagcttcga tgttcacaag tacaacagga ccacctaaac caaacagatg catctgctac 480
aaaaagttat gagaatcttg ctgctgagat tatgccagtg gaatataggg aggtgtttat 540
tcgactgcaa catgaaaata agatgcttcg cttacagcaa gaaggctctg agaatgaacg 600
tattgaggaa cttcaggagc agctagaaca gaaacaccgt aaaatgaatg aactggaaac 660
tgagcagagg ctgagcaaag agcgtattag agaattgcag cagcagattg aggacctcca 720
gaaatcttta caggaacaag gttccaagtc tgaaggcgaa agttccagca aattaaagca 780
gaagttggaa gctcatatgg aaaaactcac agaggtccat gaagaattac agaagaaaca 840
agaactcatt gaagatcttc agccagatat aaatcaaaat gtacaaaaga tcaatgaact 900
tgaagctgct cttcagaaga aagatgaaga tatgaaagca atggaggaaa gatataaaat 960
gtacttggag aaagccagaa atgtaataaa aactttggat cccaagttaa atccagcatc 1020
agctgaaata atgctactaa gaaagcagtt ggcagagaaa gagagaagaa ttgagattct 1080
ggagagtgaa tgcaaagtag caaaattccg tgattatgaa gaaaactcat tgtttctgcg 1140
tggtataata agagtctagc attccagaaa ctggggatgg aatctagact tgtgagcggc 1200
ggtggtgcct gcagtgacac tggtgcgtgc actcctgcgc ggtctttctt agcgcagcaa 1260
cggcacatca ccaacaccag aagaaatctc tctgttaaag tccctgctac aacatctgat 1320
taaactgcaa aaaaaacaaa acaaaacaaa aaaaaaaaaa aaaaaac 1367

<210> 680
<211> 2545
<212> DNA
<213> Homo Sapiens

<400> 680
ggatccaaag attcggcacg aggcggagtc gcagcctcgg tcccggagcc caccttcgcc 60
tcgcccttgc ccagcctgcg gtgatggagg cggccaccac actgcaccca ggcccgcgcc 120
cggcgctgcc cctcgggggc ccgggcccgc tgggcgagtt cctgcctcca cccgagtgcc 180
cggtcttcga acccagctgg gaagagttcg cggacccctt cgctttcatc cacaagatcc 240
ggcccatagc cgagcagact ggcatctgta aggtgcggcc gccgccggat tggcagccac 300
catttgcatg tgatgttgat aaacttcatt ttacgccacg tatccagaga ctgaatgaat 360
tggaggccca aactcgtgta aaattgaatt tcttggacca gattgcaaag tactgggagt 420
tacagggaag tactctgaaa attccacatg tggagaggaa gatcttggac ttatttcagc 480
ttaataagtt agttgcagaa gaaggtggat ttgcagttgt ttgcaaggat agaaaatgga 540
ccaaaattgc taccaagatg gggtttgctc ctggcaaagc agtgggctca catatcagag 600
ggcattatga acgaattctc aacccctaca acttattcct gtccggagac agcctaaggt 660
gtttgcagaa gccaaacctg accacagaca ctaaggacaa ggagtacaaa ccccatgata 720

ttccccagag gcagtctgtg cagccttcgg aaacgtgccc cccagcccga cgagcaaaac 780
gcatgagagc agaggccatg aatattaaaa tagaacccga ggagacaaca gaagccagaa 840
ctcataatct gagacgtcga atgggttgtc caactccaaa atgtgaaaat gagaaagaaa 900
tgaagagtag catcaagcaa gaacctattg agaggaaaga ttatattgta gaaaatgaga 960
aggaaaagcc caagagtcga tctaaaaaag ccaccaatgc tgtggacctg tatgtctgtc 1020
ttttatgtgg cagtggcaat gatgaagacc ggctactgtt gtgtgatggc tgtgatgaca 1080
gttaccatac cttttgcttg atcccacctc tccatgatgt tcccaaggga gactggaggt 1140
gtcctaagtg tttggctcag gaatgtagta agccacaaga agcatttggc tttgaacaag 1200
cagccaggga ctataccctc cgtacttttg gggaaatggc agatgcgttc aaatctgatt 1260
acttcaacat gccagtccat atggtcccca cagagcttgt tgagaaagaa ttttggagac 1320
tagtaagcac tattgaggag gatgtcacag tggaatatgg agctgacatt gcctcaaagg 1380
aatttggcag tggctttcct gtccgagatg ggaaaatcaa actctcacct gaggaagagg 1440
agtatcttga tagtggctgg aatttgaaca acatgccagt gatggagcag tctgtccttg 1500
cacatattac tgctgatata tgtggcatga aacttccttg gttgtatgtg ggaatgtgct 1560
tttcttcatt ctgttggcac attgaagacc actggagcta ttcaattaac tacttgcact 1620
ggggtgagcc aaaaacctgg tatggagtcc cagggtatgc tgctgagcag ctagaaaatg 1680
taatgaagaa actagctcca gaactctttg tgtcccagcc ggatctcctc catcagcttg 1740
tgaccatcat gaaccccaat accctgatga ctcatgaagt gcctgtttac cgaactaatc 1800
agtgtgctgg ggagtttgtg attacatttc caagagccta ccacagtgtt ttaaccaggg 1860
ttttaatttt gctgaggctg ttaacttctg cactgttgat tggctgccat taggccgaca 1920
gtgtgtggag cattatcgct tgcttcatcg atattgtgtg ttttcccatg atgagatgat 1980
ctgcaagatg gcttccaagg ctgatgtatt agatgttgta gtggcttcaa ctgttcagaa 2040
agacatggcc attatgattg aggatgagaa agctttaaga gaaactgtcc gtaaattggg 2100
agtgattgat tcggaaagaa tggattttga gctgttgcca gatgatgaac gtcagtgtgt 2160
aaaatgcaaa actacatgct tcatgtctgc catctcctgt tcttgtaaac ctggccttct 2220
tgtttgcctg catcatgtaa aagaattgtg ttcctgtcct ccttataaat ataaattgcg 2280
gtataggtac acgctggatg atctctaccc tatgatgaat gcattgaagc ttcgagcaga 2340
atcttacaac gaatgggcct tgaatgtgaa tgaagctttg gaggcaaaga tcaacaagaa 2400
gaaaagtatg tgatacagaa agtgacttgg tgattggcaa attggggctt attgtgatgt 2460
agccaaatta aagtcaacaa aacattaaaa aaaaaaaaaa aaaactcgag agtacttcta 2520
gagcgccgcg ggcccatcga ttttc 2545

<210> 681
<211> 1745
<212> DNA
<213> Homo Sapiens

<400> 681
ctagtggatc caaagaattc ggcacgaggg aagatggctt cgtttcggaa gctaacgctt 60
tctgaaaaag tgccgccaaa tcatcccagt cggaaaaagg ttaacttcct agatatgtct 120
ctagacgaca ttataatcta taaagagtta gaagggacaa atgctgaaga agaaaagaat 180
aaaagacaga accatagtaa aaaggaatcg ccttcaagac agcaatcaaa agctcataga 240
catcgccatc ggagaggcta ctcaagatgc agaagcaact ctgaggaagg aaatcatgat 300
aaaaaaccat cccaaaaacc ttctggattc aagtctggac aacacccttt aaatgggcag 360
cctttaattg agcaggagaa gtgcagtgac aattatgagg cccaagcaga gaagaatcaa 420
ggccagtcag aggggaacca gcatcaatca gaaggaaatc cggacaaatc agaagaatcc 480
cagggccaac cagaagaaaa tcatcattct gagcgatccc gaaaccactt agagagatct 540
ctttctcagt cagacagatc tcaagggcag ctaaagagac atcatcccca atatgagaga 600
tctcatggcc aatacaagag atctcatggt caatctgaga gatctcatgg ccactcagag 660
agatctcatg gtcactcaga gagatctcat ggtcactcag agagatctca tggtcactca 720
aagagatctc gtagccaggg agatcttgtg gacactcaga gtgatctcat agccactcag 780
agagatctca tagccactca gaaagatctc atagccactc agagagatct catagccact 840
cagagagatc tcatagtcac tcagagagat ctcgtggcca ctgagagaga tctcataaat 900
cagtcaggga gatctcatgg ccaatcagaa agacatcaga gatactcaac aggtaaaaat 960
acaataacta cttaatcatc agaacaatgt gttgaattct gtggaaatag aaaagcatat 1020

atctatattc taatggctaa atatgtattt gttgaaacat gtatattggg acaaagacat 1080
aaatattaga atggaggtaa tacatacata gtatcaatat tgtttcaact tgatgtcctc 1140
taagctatca tccagttacc caagatgtcc cattaagttg ttcccggtag gtctgctttc 1200
cctggaagag ccgtatgtac tcagcctttc ctattgggcc ttccccacaa ttagaatatt 1260
ttgacttagt gtcctgtccc ccttggacgt tccaacttga cttagtgtcc agtgcccctt 1320
ggacattcca acctggtagg taagctaatc taacaactaa ctgccaaatt gataatatat 1380
aatctatgat aatgaatatc tcttttgtgt ctccttccta agccatcctc agagagtcct 1440
tagcagacaa atggtagatg tatctttggg cagctgaact tttctgcttt cctcaaatca 1500
gaccatatga gaggatatat tctatgcata gatgtaatgc taaccttctg aatatatttt 1560
gaatacattt atatattcac tgttgcctta taaaactgtt agggtaggtc tgtctaccct 1620
agcaaaagaa acacagaaat ttaaatgtac tgggagttat kkkkttaaaa acacaagata 1680
tgttaactgc agtttgtttg gttattcaat aaaagtttta gttttaaaaa aaaaaaaaaa 1740
aaaac 1745

<210> 682
<211> 1745
<212> DNA
<213> Homo Sapiens

<400> 682
ctagtggatc caaagaattc ggcacgaggg aagatggctt cgtttcggaa gctaacgctt 60
tctgaaaaag tgccgccaaa tcatcccagt cggaaaaagg ttaacttcct agatatgtct 120
ctagacgaca ttataatcta taaagagtta gaagggacaa atgctgaaga agaaaagaat 180
aaaagacaga accatagtaa aaaggaatcg ccttcaagac agcaatcaaa agctcataga 240
catcgccatc ggagaggcta ctcaagatgc agaagcaact ctgaggaagg aaatcatgat 300
aaaaaaccat cccaaaaacc ttctggattc aagtctggac aacacccttt aaatgggcag 360
cctttaattg agcaggagaa gtgcagtgac aattatgagg cccaagcaga gaagaatcaa 420
ggccagtcag aggggaacca gcatcaatca gaaggaaatc cggacaaatc agaagaatcc 480
cagggccaac cagaagaaaa tcatcattct gagcgatccc gaaaccactt agagagatct 540
ctttctcagt cagacagatc tcaagggcag ctaaagagac atcatcccca atatgagaga 600
tctcatggcc aatacaagag atctcatggt caatctgaga gatctcatgg ccactcagag 660
agatctcatg gtcactcaga gagatctcat ggtcactcag agagatctca tggtcactca 720
aagagatctc gtagccaggg agatcttgtg gacactcaga gtgatctcat agccactcag 780
agagatctca tagccactca gaaagatctc atagccactc agagagatct catagccact 840
cagagagatc tcatagtcac tcagagagat ctcgtggcca ctgagagaga tctcataaat 900
cagtcaggga gatctcatgg ccaatcagaa agacatcaga gatactcaac aggtaaaaat 960
acaataacta cttaatcatc agaacaatgt gttgaattct gtggaaatag aaaagcatat 1020
atctatattc taatggctaa atatgtattt gttgaaacat gtatattggg acaaagacat 1080
aaatattaga atggaggtaa tacatacata gtatcaatat tgtttcaact tgatgtcctc 1140
taagctatca tccagttacc caagatgtcc cattaagttg ttcccggtag gtctgctttc 1200
cctggaagag ccgtatgtac tcagcctttc ctattgggcc ttccccacaa ttagaatatt 1260
ttgacttagt gtcctgtccc ccttggacgt tccaacttga cttagtgtcc agtgcccctt 1320
ggacattcca acctggtagg taagctaatc taacaactaa ctgccaaatt gataatatat 1380
aatctatgat aatgaatatc tcttttgtgt ctccttccta agccatcctc agagagtcct 1440
tagcagacaa atggtagatg tatctttggg cagctgaact tttctgcttt cctcaaatca 1500
gaccatatga gaggatatat tctatgcata gatgtaatgc taaccttctg aatatatttt 1560
gaatacattt atatattcac tgttgcctta taaaactgtt agggtaggtc tgtctaccct 1620
agcaaaagaa acacagaaat ttaaatgtac tgggagttat kkkkttaaaa acacaagata 1680
tgttaactgc agtttgtttg gttattcaat aaaagtttta gttttaaaaa aaaaaaaaaa 1740
aaaac 1745

<210> 683
<211> 3127
<212> DNA
<213> Homo Sapiens

<400> 683

gaattcggca cgagggtcag caattgctta gggcggaatg cgatttcggg ggaggaggcg 60
cgggtatgta gacagagggg gttgggacac accaggaggg gaggagccag ccccagagat 120
cgggaatcct ctcagtcctt agttacaagg ctccatcctc actttgttcg ctcctcagtc 180
gtccaggcgg attccttttt cgccaggcac caaggcacag cttagagtag acccgagtcc 240
tgctctgcgg agttcctctt cccagcgaag gtacagaggc ggatgaactg ctgagacttg 300
attgacgtat tttaagattt ttttaacttc tgaagtctag caggcctgta agaacaaaaa 360
tcattctgta ggaattaaaa acagaatcca gtcttgacaa catatccaca atgtctgatg 420
tatctactag tgtacaatca aaatttgata gacttgcaaa gaaaaaggaa aatatcacct 480
atatgagcag agagcagtta acagaaactg ataaggacat agctccggta ttagcattta 540
aaagtcaagg acgtatcagc aattatgaat aagtttaagg tcttaatgga aattcaagac 600
ctgatgtttg aggagatgag ggaaactctt aaaaatgacc taaaagcagt tttaggagga 660
aaagctacaa tacctgaggt aaagaattca gagaactcca gtagtaggca ggtttcagca 720
aataatcaat ttagcattac aaaaaacagg gatggtaggg aaaatagaag gagaaactct 780
aaaataggtg atgataatga aaatttaacc tttaaattag aagtaaatga gctgagtggt 840
aaattagaca acactaacga atacaatagt aatgatggta agaaattacc ccagggtgaa 900
tcacgaagtt acgaagtcat gggaagtatg gaagaaacct tatgcaatat agatgacaga 960
gatggaaatc gcaatgtcca tttagaattt acagaaagag agagtaggaa ggatggagag 1020
gatgaatttg tcaaagaaat gagagaggaa agaaaatttc agaaattgaa gaataaagag 1080
gaggttttaa aagcctccag agaagaaaaa gtgttgatgg atgaaggagc agtacttacc 1140
ctggcagccg acctttcatc agcaacactg gatattagta agcaatggag taatgtcttc 1200
aacattctga gagaaaatga ttttgaacct aaatttctgt gtgaagttaa attagcattt 1260
aaatgtgatg gtgaaataaa gacattttca gatctgcaaa gccttagaaa atttgccagc 1320
caaaaatctt ctatganaga wttactgana gatgtactcc cacaaaagga agaaataaat 1380
caaggaggaa gaaaatatgg nattcaagaa aaaagggata aaaccctaat agactcanag 1440
catagagctg gagaaataac cagtgatggc ttgagcttcc tatttcttaa agaagtaaaa 1500
gttgctaagc cagaggagat gaaaaactta gagactcaag aggaagagtt ttccgagcta 1560
gaggagctgg atgaagaggc ttcagggatg gaggatgatg aagatacctc agggctggag 1620
gaggaagaag aagaagaggc ttcagggttg gaggaggatg antcctcang gctagaggag 1680
gaagaggaac agacttcaga acaggactca acctttcang gtcatacttt ggtagatgca 1740
aagcatgaag ttgagataac cagtnatggc atggaaacta ctttcattga ctctgtagag 1800
gattctgaat cagaggagga agaggaagga aagagctctg aaacaggaaa ggtaaagact 1860
acctccctga ctgagaaaaa agcctcacgt agacaaaaag aaattccctt tagttatttg 1920
gttggggact ctgggaagaa aaagttggtg aaacaccagg tggtgcacaa aacccaggag 1980
gaagaggaaa cagctgtgcc cacaagtcaa ggaactggca caacctgtct gaccttatgt 2040
ttggcctctc cctcaaagtc actagagatg agtcatgatg agcataaaaa gcattcacat 2100
acaaatttga gtatttcaac aggagtcacc aaacttaaga aaacagaaga aaagaaacac 2160
aggactctgc acacagaaga actaacatcc aaagaagcag acttaacaga ggaaacagaa 2220
gaaaacttga gaagtagtgt gattaatagc atcagagaga taaaagagga gattggaaat 2280
ttgaaaagtt cccattcagg tgtcttggaa attgaaaatt cagtagatga tctgagtagc 2340
agaatggaca tccttgaaga aagaatagac agtctagaag atcaaattga agaattctct 2400
aaggatacaa tgcaaatgac caaacagata attagtaaag aagggccnag agatatagag 2460
gagagatcta gaagttgcaa cattcgtttg ataggaattc cagaaaagga gagttatgag 2520
aatagggcag aggacataat taaggaaata attgatgaaa actttgcaga actaaagaaa 2580
ggttcaagtc ttgagattgt cagtgcttgt cgagtaccta gtaaaattga tgaaaagaga 2640
ctgactccta gacacatctt ggtgaaattt tggaattcta gtgataaaga gaaaataata 2700
aggccttcta gagagagaag agaaattacc taccaaggaa caagaatcag gttgacagca 2760
gacttatcac tggacacact ggatgctaga agtaaatgga gcaatgtctt caaagttctg 2820
ctggaaaaag gctttaaccc tagaacccta tacccagcca aaatggcatt tgattttagg 2880
ggtaaaacaa aggtattcct tagtattgaa gaatttagag attatgtttt gcatatgccc 2940
accttgagag aattactggg gaataatata ccttagcacc ccagggtgac tacaaacaat 3000
atgctttcct cccccagcat gcacccaaaa accaacaagt aaaacgaaag tacacttcta 3060
cccagaagga tggacagcta ataccgtact tggggatgag gagcaaggaa tattacagat 3120
attaccc 3127

<210> 684
<211> 803
<212> PRT
<213> Homo Sapiens

<400> 684

```
Met Asn Lys Phe Lys Val Leu Met Glu Ile Gln Asp Leu Met Phe Glu
 1               5                  10                  15
Glu Met Arg Glu Thr Leu Lys Asn Asp Leu Lys Ala Val Leu Gly Gly
            20                  25                  30
Lys Ala Thr Ile Pro Glu Val Lys Asn Ser Glu Asn Ser Ser Ser Arg
        35                  40                  45
Gln Val Ser Ala Asn Asn Gln Phe Ser Ile Thr Lys Asn Arg Asp Gly
    50                  55                  60
Arg Glu Asn Arg Arg Arg Asn Ser Lys Ile Gly Asp Asp Asn Glu Asn
65                  70                  75                  80
Leu Thr Phe Lys Leu Glu Val Asn Glu Leu Ser Gly Lys Leu Asp Asn
                85                  90                  95
Thr Asn Glu Tyr Asn Ser Asn Asp Gly Lys Lys Leu Pro Gln Gly Glu
            100                 105                 110
Ser Arg Ser Tyr Glu Val Met Gly Ser Met Glu Glu Thr Leu Cys Asn
        115                 120                 125
Ile Asp Asp Arg Asp Gly Asn Arg Asn Val His Leu Glu Phe Thr Glu
    130                 135                 140
Arg Glu Ser Arg Lys Asp Gly Glu Asp Glu Phe Val Lys Glu Met Arg
145                 150                 155                 160
Glu Glu Arg Lys Phe Gln Lys Leu Lys Asn Lys Glu Glu Val Leu Lys
                165                 170                 175
Ala Ser Arg Glu Glu Lys Val Leu Met Asp Glu Gly Ala Val Leu Thr
            180                 185                 190
Leu Ala Ala Asp Leu Ser Ser Ala Thr Leu Asp Ile Ser Lys Gln Trp
        195                 200                 205
Ser Asn Val Phe Asn Ile Leu Arg Glu Asn Asp Phe Glu Pro Lys Phe
    210                 215                 220
Leu Cys Glu Val Lys Leu Ala Phe Lys Cys Asp Gly Glu Ile Lys Thr
225                 230                 235                 240
Phe Ser Asp Leu Gln Ser Leu Arg Lys Phe Ala Ser Gln Lys Ser Ser
                245                 250                 255
Met Xaa Xaa Leu Leu Xaa Asp Val Leu Pro Gln Lys Glu Glu Ile Asn
            260                 265                 270
Gln Gly Gly Arg Lys Tyr Gly Ile Gln Glu Lys Arg Asp Lys Thr Leu
        275                 280                 285
Ile Asp Ser Xaa His Arg Ala Gly Glu Ile Thr Ser Asp Gly Leu Ser
    290                 295                 300
Phe Leu Phe Leu Lys Glu Val Lys Val Ala Lys Pro Glu Glu Met Lys
305                 310                 315                 320
Asn Leu Glu Thr Gln Glu Glu Glu Phe Ser Glu Leu Glu Glu Leu Asp
                325                 330                 335
Glu Glu Ala Ser Gly Met Glu Asp Asp Glu Asp Thr Ser Gly Leu Glu
            340                 345                 350
Glu Glu Glu Glu Glu Glu Ala Ser Gly Leu Glu Glu Asp Xaa Ser Ser
        355                 360                 365
Xaa Leu Glu Glu Glu Glu Glu Gln Thr Ser Glu Gln Asp Ser Thr Phe
    370                 375                 380
Xaa Gly His Thr Leu Val Asp Ala Lys His Glu Val Glu Ile Thr Ser
```

```
385                 390                 395                 400
Xaa Gly Met Glu Thr Thr Phe Ile Asp Ser Val Glu Asp Ser Glu Ser
                405                 410                 415
Glu Glu Glu Glu Glu Gly Lys Ser Ser Glu Thr Gly Lys Val Lys Thr
            420                 425                 430
Thr Ser Leu Thr Glu Lys Lys Ala Ser Arg Arg Gln Lys Glu Ile Pro
        435                 440                 445
Phe Ser Tyr Leu Val Gly Asp Ser Gly Lys Lys Lys Leu Val Lys His
    450                 455                 460
Gln Val Val His Lys Thr Gln Glu Glu Glu Glu Thr Ala Val Pro Thr
465                 470                 475                 480
Ser Gln Gly Thr Gly Thr Thr Cys Leu Thr Leu Cys Leu Ala Ser Pro
                485                 490                 495
Ser Lys Ser Leu Glu Met Ser His Asp Glu His Lys Lys His Ser His
            500                 505                 510
Thr Asn Leu Ser Ile Ser Thr Gly Val Thr Lys Leu Lys Lys Thr Glu
        515                 520                 525
Glu Lys Lys His Arg Thr Leu His Thr Glu Glu Leu Thr Ser Lys Glu
    530                 535                 540
Ala Asp Leu Thr Glu Glu Thr Glu Glu Asn Leu Arg Ser Ser Val Ile
545                 550                 555                 560
Asn Ser Ile Arg Glu Ile Lys Glu Glu Ile Gly Asn Leu Lys Ser Ser
                565                 570                 575
His Ser Gly Val Leu Glu Ile Glu Asn Ser Val Asp Asp Leu Ser Ser
            580                 585                 590
Arg Met Asp Ile Leu Glu Glu Arg Ile Asp Ser Leu Glu Asp Gln Ile
        595                 600                 605
Glu Glu Phe Ser Lys Asp Thr Met Gln Met Thr Lys Gln Ile Ile Ser
    610                 615                 620
Lys Glu Gly Pro Arg Asp Ile Glu Glu Arg Ser Arg Ser Cys Asn Ile
625                 630                 635                 640
Arg Leu Ile Gly Ile Pro Glu Lys Glu Ser Tyr Glu Asn Arg Ala Glu
                645                 650                 655
Asp Ile Ile Lys Glu Ile Ile Asp Glu Asn Phe Ala Glu Leu Lys Lys
            660                 665                 670
Gly Ser Ser Leu Glu Ile Val Ser Ala Cys Arg Val Pro Ser Lys Ile
        675                 680                 685
Asp Glu Lys Arg Leu Thr Pro Arg His Ile Leu Val Lys Phe Trp Asn
    690                 695                 700
Ser Ser Asp Lys Glu Lys Ile Ile Arg Pro Ser Arg Glu Arg Arg Glu
705                 710                 715                 720
Ile Thr Tyr Gln Gly Thr Arg Ile Arg Leu Thr Ala Asp Leu Ser Leu
                725                 730                 735
Asp Thr Leu Asp Ala Arg Ser Lys Trp Ser Asn Val Phe Lys Val Leu
            740                 745                 750
Leu Glu Lys Gly Phe Asn Pro Arg Thr Leu Tyr Pro Ala Lys Met Ala
        755                 760                 765
Phe Asp Phe Arg Gly Lys Thr Lys Val Phe Leu Ser Ile Glu Glu Phe
    770                 775                 780
Arg Asp Tyr Val Leu His Met Pro Thr Leu Arg Glu Leu Leu Gly Asn
785                 790                 795                 800
Asn Ile Pro
```

<210> 685

<211> 947
<212> PRT
<213> Homo Sapiens

<400> 685

```
Met Ser Leu Pro Ser Arg Gln Thr Ala Ile Ile Val Asn Pro Pro Pro
 1               5                  10                  15
Pro Glu Tyr Ile Asn Thr Lys Lys Asn Gly Arg Leu Thr Asn Gln Leu
            20                  25                  30
Gln Tyr Leu Gln Lys Val Val Leu Lys Asp Leu Trp Lys His Ser Phe
        35                  40                  45
Ser Trp Pro Phe Gln Arg Pro Val Asp Ala Val Lys Leu Lys Leu Pro
    50                  55                  60
Asp Tyr Tyr Thr Ile Ile Lys Asn Pro Met Asp Leu Asn Thr Ile Lys
65                  70                  75                  80
Lys Arg Leu Glu Asn Lys Tyr Tyr Ala Lys Ala Ser Glu Cys Ile Glu
                85                  90                  95
Asp Phe Asn Thr Met Phe Ser Asn Cys Tyr Leu Tyr Asn Lys Pro Gly
            100                 105                 110
Asp Asp Ile Val Leu Met Ala Gln Ala Leu Glu Lys Leu Phe Met Gln
        115                 120                 125
Lys Leu Ser Gln Met Pro Gln Glu Glu Gln Val Val Gly Val Lys Glu
    130                 135                 140
Arg Ile Lys Lys Gly Thr Gln Gln Asn Ile Ala Val Ser Ser Ala Lys
145                 150                 155                 160
Glu Lys Ser Ser Pro Ser Ala Thr Glu Lys Val Phe Lys Gln Gln Glu
                165                 170                 175
Ile Pro Ser Val Phe Pro Lys Thr Ser Ile Ser Pro Leu Asn Val Val
            180                 185                 190
Gln Gly Ala Ser Val Asn Ser Ser Ser Gln Thr Ala Ala Gln Val Thr
        195                 200                 205
Lys Gly Val Lys Arg Lys Ala Asp Thr Thr Thr Pro Ala Thr Ser Ala
    210                 215                 220
Val Lys Ala Ser Ser Glu Phe Ser Pro Thr Phe Thr Glu Lys Ser Val
225                 230                 235                 240
Ala Leu Pro Pro Ile Lys Glu Asn Met Pro Lys Asn Val Leu Pro Asp
                245                 250                 255
Ser Gln Gln Gln Tyr Asn Val Val Glu Thr Val Lys Val Thr Glu Gln
            260                 265                 270
Leu Arg His Cys Ser Glu Ile Leu Lys Glu Met Leu Ala Lys Lys His
        275                 280                 285
Phe Ser Tyr Ala Trp Pro Phe Tyr Asn Pro Val Asp Val Asn Ala Leu
    290                 295                 300
Gly Leu His Asn Tyr Tyr Asp Val Val Lys Asn Pro Met Asp Leu Gly
305                 310                 315                 320
Thr Ile Lys Glu Lys Met Asp Asn Gln Glu Tyr Lys Asp Ala Tyr Ser
                325                 330                 335
Phe Ala Ala Asp Val Arg Leu Met Phe Met Asn Cys Tyr Lys Tyr Asn
            340                 345                 350
Pro Pro Asp His Glu Val Val Thr Met Ala Arg Met Leu Gln Asp Val
        355                 360                 365
Phe Glu Thr His Phe Ser Lys Ile Pro Ile Glu Pro Val Glu Ser Met
    370                 375                 380
Pro Leu Cys Tyr Ile Lys Thr Asp Ile Thr Glu Thr Thr Gly Arg Glu
385                 390                 395                 400
```

```
Asn Thr Asn Glu Ala Ser Ser Glu Gly Asn Ser Ser Asp Asp Ser Glu
                405                 410                 415
Asp Glu Arg Val Lys Arg Leu Ala Lys Leu Gln Glu Gln Leu Lys Ala
            420                 425                 430
Val His Gln Gln Leu Gln Val Leu Ser Gln Val Pro Phe Arg Lys Leu
        435                 440                 445
Asn Lys Lys Lys Glu Lys Ser Lys Lys Glu Lys Lys Lys Glu Lys Val
    450                 455                 460
Asn Asn Ser Asn Glu Asn Pro Arg Lys Met Cys Glu Gln Met Arg Leu
465                 470                 475                 480
Lys Glu Lys Ser Lys Arg Asn Gln Pro Lys Lys Arg Lys Gln Gln Phe
                485                 490                 495
Ile Gly Leu Lys Ser Glu Asp Glu Asp Asn Ala Lys Pro Met Asn Tyr
            500                 505                 510
Asp Glu Lys Arg Gln Leu Ser Leu Asn Ile Asn Lys Leu Pro Gly Asp
        515                 520                 525
Lys Leu Gly Arg Val Val His Ile Ile Gln Ser Arg Glu Pro Ser Leu
    530                 535                 540
Ser Asn Ser Asn Pro Asp Glu Ile Glu Ile Asp Phe Glu Thr Leu Lys
545                 550                 555                 560
Ala Ser Thr Leu Arg Glu Leu Glu Lys Tyr Val Ser Ala Cys Leu Arg
                565                 570                 575
Lys Arg Pro Leu Lys Pro Pro Ala Lys Lys Ile Met Met Ser Lys Glu
            580                 585                 590
Glu Leu His Ser Gln Lys Lys Gln Glu Leu Glu Lys Arg Leu Leu Asp
        595                 600                 605
Val Asn Asn Gln Leu Asn Ser Arg Lys Arg Gln Thr Lys Ser Asp Lys
    610                 615                 620
Thr Gln Pro Ser Lys Ala Val Glu Asn Val Ser Arg Leu Ser Glu Ser
625                 630                 635                 640
Ser Ser Ser Ser Ser Ser Ser Ser Glu Ser Glu Ser Ser Ser Ser Asp
                645                 650                 655
Leu Ser Ser Ser Asp Ser Ser Asp Ser Glu Ser Glu Met Phe Pro Lys
            660                 665                 670
Phe Thr Glu Val Lys Pro Asn Asp Ser Pro Ser Lys Glu His Val Lys
        675                 680                 685
Lys Met Lys Asn Glu Cys Ile Leu Pro Glu Gly Arg Thr Gly Val Thr
    690                 695                 700
Gln Ile Gly Tyr Cys Val Gln Asp Thr Thr Ser Ala Asn Thr Thr Leu
705                 710                 715                 720
Val His Gln Thr Thr Pro Ser His Val Met Pro Pro Asn His His Gln
                725                 730                 735
Leu Ala Phe Asn Tyr Gln Glu Leu Glu His Leu Gln Thr Val Lys Asn
            740                 745                 750
Ile Ser Pro Leu Gln Ile Leu Pro Pro Ser Gly Asp Ser Glu Gln Leu
        755                 760                 765
Ser Asn Gly Ile Thr Val Met His Pro Ser Gly Asp Ser Asp Thr Thr
    770                 775                 780
Met Leu Glu Ser Glu Cys Gln Ala Pro Val Gln Lys Asp Ile Lys Ile
785                 790                 795                 800
Lys Asn Ala Asp Ser Trp Lys Ser Leu Gly Lys Pro Val Lys Pro Ser
                805                 810                 815
Gly Val Met Lys Ser Ser Asp Glu Leu Phe Asn Gln Phe Arg Lys Ala
            820                 825                 830
Ala Ile Glu Lys Glu Val Lys Ala Arg Thr Gln Glu Leu Ile Arg Lys
```

```
        835                 840                 845
His Leu Glu Gln Asn Thr Lys Glu Leu Lys Ala Ser Gln Glu Asn Gln
    850                 855                 860
Arg Asp Leu Gly Asn Gly Leu Thr Val Glu Ser Phe Ser Asn Lys Ile
865                 870                 875                 880
Gln Asn Lys Cys Ser Gly Glu Glu Gln Lys Glu His Pro Gln Ser Ser
                885                 890                 895
Glu Ala Gln Asp Lys Ser Lys Leu Trp Leu Leu Lys Asp Arg Asp Leu
            900                 905                 910
Ala Arg Pro Lys Glu Gln Glu Arg Arg Arg Arg Glu Ala Met Val Gly
        915                 920                 925
Thr Ile Asp Met Thr Leu Gln Ser Asp Ile Met Thr Met Phe Glu Asn
    930                 935                 940
Asn Phe Asp
945
```

<210> 686
<211> 3106
<212> DNA
<213> Homo Sapiens

<400> 686

```
gtggcaagat gttcctggga ggtcaagtta agagtcaaaa ataattcatt agatttaaca      60
atttagcatg gacatgtact tgtagacagg attcaaagca gttaagaatg tctctgccaa     120
gtcgacaaac agctattatt gttaaccctc ctccaccaga atatataaat actaagaaaa     180
atgggcgatt gacaaatcaa cttcagtatc tacaaaaagt tgtcctaaag gatttatgga     240
agcatagttt ttcatggccc tttcaacgtc ctgtggatgc tgtgaaacta aagttgcctg     300
attattatac cattataaaa aacccaatgg atttaaatac aattaagaag cgcttggaga     360
ataaatatta tgcgaaggct tcagaatgta tagaagactt caatacaatg ttctcaaatt     420
gttatttata taacaagcct ggagatgaca ttgttcttat ggcacaagct ctagagaagc     480
tgtttatgca gaaattatct cagatgccac aagaagagca agttgtgggt gttaaggaaa     540
gaatcaagaa aggcactcaa cagaatatag ctgtttcttc tgctaaagaa aaatcatcac     600
ccagcgcaac agaaaaagta tttaagcagc aagaaattcc ttctgtattt cctaagacat     660
ctatttctcc cttgaacgtg gtacagggag cttcagtcaa ctccagttca caaactgcgg     720
cccaagttac aaaaggtgtg aagaggaaag cagatacaac aactcctgca acttcagcag     780
ttaaagcaag tagtgaattt tctccaacat tcacagaaaa atcagtggca ctgccaccta     840
taaaagaaaa tatgccaaag aatgttttgc cagattctca gcaacaatat aatgttgtgg     900
agactgttaa agtaactgaa caattaaggc actgtagtga gattcttaaa gaaatgcttg     960
caaagaaaca tttttcatat gcatggccct tttataatcc tgttgacgtt aatgctttgg    1020
gactccataa ctactatgac gttgtcaaaa atccgatgga tcttggaact attaaggaga    1080
aaatggataa ccaagaatat aaggatgcat actcatttgc ggcagatgtt agattaatgt    1140
tcatgaattg ctacaagtac aatcctccag atcacgaagt tgtgacaatg gcaagaatgc    1200
ttcaggatgt tttcgaaacg catttttcaa agatcccgat tgaacctgtt gagagtatgc    1260
ctttatgtta catcaaaaca gatatcacag aaaccactgg tagagagaac actaatgaag    1320
cctcctctga agggaactct tctgatgatt ctgaagatga gcgagttaag cgtcttgcaa    1380
agcttcagga gcagcttaaa gctgtacatc aacagctcca ggttttgtcc caagtacctt    1440
tccgtaagct aaataaaaag aaagagaagt ctaaaaagga aaagaaaaaa gaaaaggtta    1500
ataacagcaa tgaaaatcca agaaaaatgt gtgagcaaat gaggctaaag gaaaagtcca    1560
agagaaatca gccaaagaaa aggaaacaac agttcattgg tctaaaatct gaagatgaag    1620
ataatgctaa acctatgaac tatgatgaga aaaggcagtt aagtctgaat ataaacaaac    1680
tccctggaga taaacttggg cgagtagttc acataataca atcaagagag ccttctctga    1740
gcaattccaa tcctgatgag atagagatag actttgaaac actgaaagca tcaacactaa    1800
gagaattaga aaaatatgtt tcggcatgtc taagaaagag accattaaaa cctcctgcta    1860
agaaaataat gatgtccaaa gaagaacttc actcacagaa aaaacaggaa ttggaaaagc    1920
ggttactgga tgttaataat cagttaaatt ctagaaaacg tcaaacaaaa tctgataaaa    1980
```

cgcaaccatc caaagctgtt gaaaatgttt cccgactgag tgagagcagc agcagcagca 2040
gcagctcatc agagtctgaa agtagcagca gtgacttaag ctcttcagac agcagtgatt 2100
ctgaatcaga aatgttccct aagtttacag aagtaaaacc aaatgattct ccttctaaag 2160
agcatgtaaa gaaaatgaag aatgaatgca tactgcctga aggaagaaca ggcgtcacac 2220
agataggata ttgtgtgcaa gacacaacct ctgccaatac tacccttgtt catcagacca 2280
caccttcaca tgtaatgcca ccaaatcacc accaattagc atttaattat caagaattag 2340
aacatttaca gactgtgaaa aacatttcac ctttacaaat tctgcctccc tcaggtgatt 2400
ctgaacagct ctcaaatggc ataactgtga tgcatccatc tggtgatagt gacacaacga 2460
tgttagaatc tgaatgtcaa gctcctgtac agaaggatat aaagattaag aatgcagatt 2520
catggaaaag tttaggcaaa ccagtgaaac catcaggtgt aatgaaatcc tcagatgagc 2580
tcttcaacca atttagaaaa gcagccatag aaaaggaagt aaaagctcgg acacaggaac 2640
tcatacggaa gcatttggaa caaaatacaa aggaactaaa agcatctcaa gaaaatcaga 2700
gggatcttgg gaatggattg actgtagaat ctttttcaaa taaaatacaa aacaagtgct 2760
ctggagaaga gcagaaagaa catccgcagt catcagaagc tcaagataaa tccaaactct 2820
ggcttctcaa agaccgtgat ttagccaggc cgaaagaaca agagaggagg aggagagaag 2880
ccatggtggg taccattgat atgacccttc aaagtgacat tatgacaatg tttgaaaaca 2940
actttgatta aaactcagtt tttaaattaa ccatccactt aaaatgaatg gtaaaagatc 3000
aaaatgcata tggtaaaatg attgctttca gataacaaga taccaatctt atattgtatt 3060
ttgactgctc taaaatgatt aaacagtttt cacttacaaa aaaaaa 3106

<210> 687
<211> 1759
<212> DNA
<213> Homo Sapiens

<400> 687
gtcactccgc aattagacag ctaagagatc tgtgttactt ccctcacata tataaataat 60
tttaaataaa aatcatggcg tgaataattt ctttcctcta ccgatttgaa gctatccatt 120
tggaagacca ctctgaagag atgaaataag tcttctgcca aagattactt attaatttac 180
aaggaaaagg ggaagttttg ttcctctccg tgaatttgat tgaaaatcga gggctttctc 240
gaatagtttt ggcatccagg gtcatttttc attaaaaaga gaaaagtcat gtcaaatatg 300
aatttccgca gattattcag cactagaccc tgggagattc tgtaaagagg ggttttgtta 360
tactcaactt ttccgggtaa aacaaacaca aatactcctc ctccaagggg cgggggcggt 420
gcctaggtga tgcaccaatc acagcgcgcc ctaccctata taagccccga ggccgcccgg 480
gtgtttcatg cttttcgctg gttattacat cttgcgtttc tctgttgtta tgtctgaaac 540
cgtgcctgca gcttctgcca gtgctggtct agccgctatg gagaaacttc caaccaagaa 600
gcgagggagg aagccggctg gcttgataag tgcaagtcgc aaagtgccga acctctctgt 660
gtccaagttg atcaccgagg ccctttcagt gtcacaggaa cgagtaggta tgtctttggt 720
tgcgctcaag aaggcattgg ccgctgctgg ctacgacgta gagaagaata acagccgcat 780
caaactgtcc ctcaagagct tagtgaacaa gggaatcctg gtgcaaacca ggggtactgg 840
tgcttccggt tcctttaagc ttagtaagaa ggtgattcct aaatctacac gaagcaaggc 900
taaaaagtca gtttctgcca agaccaagaa gctggtttta tccagggact ccaagtcacc 960
aaagactgct aaaaccaata agagagccaa gaagccgaga gcgacaactc ctaaaactgt 1020
taggagcggg agaaaggcta aaggagccaa gggtaagcaa cagcagaaga gcccagtgaa 1080
ggcaagggct tcgaagtcaa aattgaccca acatcatgaa gttaatgtta gaaaggccac 1140
atctaagaag taaagagctt tccgggaggc caatttggaa agaacccaaa ggctctttta 1200
agagccaccc acattatttt aagatggcgt aacactggaa acaagtttct gtgacagtta 1260
tctataggtt taagttgtga tgcagctgag ttgaaaaggc ttgagattgg agaattaatt 1320
caggccaggc ttcaagacca tcctgggcaa catagccaga ctaccatcta taccaggggt 1380
cctcattccc ccggccaccg accggtaacc ggtccctgtc catggcacgt tatgaattga 1440
gccgcacagc tgaggggtga gcgaacatta accaactgag ctccaccgcc tgtcaggtta 1500
gctgcagcat tagatagatt ctcataagct caaactgtat tgtgaatggc acatgcaagg 1560
gatctaggtt tcaggctcct tgtgacaatc taatgcctga tgatctgagg ttggagcagt 1620
tttagtccgg aaatcattgc tcccagcccc tgcacccccc ggtccgtggt ataattgtct 1680
tacacaaacg gtctcttgtg tcaaaaaggt tggagactac tggtttttac aaaaaagtaa 1740

attagtcaag catggttgg 1759

<210> 688
<211> 207
<212> PRT
<213> Homo Sapiens

<400> 688

```
Met Ser Glu Thr Val Pro Ala Ala Ser Ala Ser Ala Gly Leu Ala Ala
 1               5                  10                  15
Met Glu Lys Leu Pro Thr Lys Lys Arg Gly Arg Lys Pro Ala Gly Leu
            20                  25                  30
Ile Ser Ala Ser Arg Lys Val Pro Asn Leu Ser Val Ser Lys Leu Ile
        35                  40                  45
Thr Glu Ala Leu Ser Val Ser Gln Glu Arg Val Gly Met Ser Leu Val
    50                  55                  60
Ala Leu Lys Lys Ala Leu Ala Ala Ala Gly Tyr Asp Val Glu Lys Asn
65                  70                  75                  80
Asn Ser Arg Ile Lys Leu Ser Leu Lys Ser Leu Val Asn Lys Gly Ile
                85                  90                  95
Leu Val Gln Thr Arg Gly Thr Gly Ala Ser Gly Ser Phe Lys Leu Ser
            100                 105                 110
Lys Lys Val Ile Pro Lys Ser Thr Arg Ser Lys Ala Lys Lys Ser Val
        115                 120                 125
Ser Ala Lys Thr Lys Lys Leu Val Leu Ser Arg Asp Ser Lys Ser Pro
    130                 135                 140
Lys Thr Ala Lys Thr Asn Lys Arg Ala Lys Lys Pro Arg Ala Thr Thr
145                 150                 155                 160
Pro Lys Thr Val Arg Ser Gly Arg Lys Ala Lys Gly Ala Lys Gly Lys
                165                 170                 175
Gln Gln Gln Lys Ser Pro Val Lys Ala Arg Ala Ser Lys Ser Lys Leu
            180                 185                 190
Thr Gln His His Glu Val Asn Val Arg Lys Ala Thr Ser Lys Lys
        195                 200                 205
```

<210> 689
<211> 1464
<212> DNA
<213> Homo Sapiens

<400> 689

```
agtaccgggt acgcaggggt gcctcaacca cactccgtcc acggactctc cgttatttta     60
ggaggtccct ggccaaagat ttatttctct tgacaaccaa gggcctccgt ctggatttcc    120
aaggaagaat ttcctctgaa gcaccggaac ttgctactac cagcaccatg ccctaccaat    180
atccagcact gaccccggag cagaagaagg agctgtctga catcgctcac cgcatcgtgg    240
cacctggcaa gggcatcctg gctgcagatg agtccactgg gagcattgcc aagcggctgc    300
agtccattgg caccgagaac accgaggaga accggcgctt ctaccgccag ctgctgctga    360
cagctgacga ccgcgtgaac ccctgcattg ggggtgtcat cctcttccat gagacactct    420
accagaaggc ggatgatggg cgtcccttcc cccaagttat caaatccaag ggcggtgttg    480
tgggcatcaa ggtagacaag ggcgtggtcc ccctggcagg gacaaatggc gagactacca    540
cccaagggtt ggatgggctg tctgagcgct gtgcccagta caagaaggac ggagctgact    600
tcgccaagtg gcgttgtgtg ctgaagattg gggaacacac cccctcagcc ctcgccatca    660
tggaaaatgc caatgttctg gcccgttatg ccagtatctg ccagcagaat ggcattgtgc    720
ccatcgtgga gcctgagatc ctccctgatg gggaccatga cttgaagcgc tgccagtatg    780
tgaccgagaa ggtgctggct gctgtctaca aggctctgag tgaccaccac atctacctgg    840
```

```
aaggcacctt gctgaagccc aacatggtca ccccaggcca tgcttgcact cagaagtttt     900
ctcatgagga gattgccatg gcgaccgtca cagcgctgcg ccgcacagtg ccccccgctg     960
tcactgggat caccttcctg tctggaggcc agagtgagga ggaggcgtcc atcaacctca    1020
atgccattaa caagtgcccc ctgctgaagc cctgggccct gaccttctcc tacggccgag    1080
ccctgcaggc ctctgccctg aaggcctggg gcgggaagaa ggagaacctg aaggctgcgc    1140
aggaggagta tgtcaagcga gccctggcca acagccttgc ctgtcaagga aagtacactc    1200
cgagcggtca ggctggggct gctgccagcg agtccctctt cgtctctaac cacgcctatt    1260
aagcggaggt gttcccaggc tgcccccaac aactccaggc cctgcccccc cccactcttg    1320
aagaggaggc cgcctcctcg gggctccagg ctggcttgcc cgcgctcttt cttccctcgt    1380
gacagtggtg tgtggtgtcg tctgtgaatg ctaagtccat cacccttcc ggcacactgc    1440
caaataaaca gctatttaag gggg                                          1464
```

<210> 690
<211> 363
<212> PRT
<213> Homo Sapiens

<400> 690

```
Pro Tyr Gln Tyr Pro Ala Leu Thr Pro Glu Gln Lys Lys Glu Leu Ser
 1               5                  10                  15
Asp Ile Ala His Arg Ile Val Ala Pro Gly Lys Gly Ile Leu Ala Ala
            20                  25                  30
Asp Glu Ser Thr Gly Ser Ile Ala Lys Arg Leu Gln Ser Ile Gly Thr
        35                  40                  45
Glu Asn Thr Glu Glu Asn Arg Arg Phe Tyr Arg Gln Leu Leu Leu Thr
    50                  55                  60
Ala Asp Asp Arg Val Asn Pro Cys Ile Gly Gly Val Ile Leu Phe His
65                  70                  75                  80
Glu Thr Leu Tyr Gln Lys Ala Asp Asp Gly Arg Pro Phe Pro Gln Val
                85                  90                  95
Ile Lys Ser Lys Gly Gly Val Val Gly Ile Lys Val Asp Lys Gly Val
            100                 105                 110
Val Pro Leu Ala Gly Thr Asn Gly Glu Thr Thr Thr Gln Gly Leu Asp
        115                 120                 125
Gly Leu Ser Glu Arg Cys Ala Gln Tyr Lys Lys Asp Gly Ala Asp Phe
    130                 135                 140
Ala Lys Trp Arg Cys Val Leu Lys Ile Gly Glu His Thr Pro Ser Ala
145                 150                 155                 160
Leu Ala Ile Met Glu Asn Ala Asn Val Leu Ala Arg Tyr Ala Ser Ile
                165                 170                 175
Cys Gln Gln Asn Gly Ile Val Pro Ile Val Glu Pro Glu Ile Leu Pro
            180                 185                 190
Asp Gly Asp His Asp Leu Lys Arg Cys Gln Tyr Val Thr Glu Lys Val
        195                 200                 205
Leu Ala Ala Val Tyr Lys Ala Leu Ser Asp His His Ile Tyr Leu Glu
    210                 215                 220
Gly Thr Leu Leu Lys Pro Asn Met Val Thr Pro Gly His Ala Cys Thr
225                 230                 235                 240
Gln Lys Phe Ser His Glu Glu Ile Ala Met Ala Thr Val Thr Ala Leu
                245                 250                 255
Arg Arg Thr Val Pro Pro Ala Val Thr Gly Ile Thr Phe Leu Ser Gly
            260                 265                 270
Gly Gln Ser Glu Glu Glu Ala Ser Ile Asn Leu Asn Ala Ile Asn Lys
        275                 280                 285
Cys Pro Leu Leu Lys Pro Trp Ala Leu Thr Phe Ser Tyr Gly Arg Ala
```

```
    290                 295                 300
Leu Gln Ala Ser Ala Leu Lys Ala Trp Gly Gly Lys Lys Glu Asn Leu
305                 310                 315                 320
Lys Ala Ala Gln Glu Glu Tyr Val Lys Arg Ala Leu Ala Asn Ser Leu
                325                 330                 335
Ala Cys Gln Gly Lys Tyr Thr Pro Ser Gly Gln Ala Gly Ala Ala Ala
            340                 345                 350
Ser Glu Ser Leu Phe Val Ser Asn His Ala Tyr
        355                 360
```

<210> 691
<211> 1216
<212> DNA
<213> Homo Sapiens

<400> 691

```
atgctcctcg atgtggagcc gctggagcct acacttagca acatcatcga gcagcgcagc      60
ctgaagtgga tcttcgtcgg gggcaagggt ggtgtgggca agaccacctg cagctgcagc     120
ctggcagtcc agctctccaa ggggcgtgag agtgttctga tcatctccac agacccagca     180
cacaacatct cagatgcttt tgaccagaag ttctcaaagg tgcctaccaa ggtcaaaggc     240
tatgacaacc tctttgctat ggagattgac cccagcctgg gcgtggcgga cgtgcctgac     300
gagttcttcg aggaggacaa catgctgagc atgggcaaga agatgatgca ggaggccatg     360
agcgcatttc ccggcatcga tgaggccatg agctatgccg aggtcatgag gctggtgaag     420
ggcatgaact tctcggtggt ggtatttgac acggcaccca cgggccacac cctgaggctg     480
ctcaacttcc ccaccatcgt ggagcggggc ctgggccggc ttatgcagat caagaaccag     540
atcagccctt tcatctcaca gatgtgcaac atgctgggcc tgggggacat gaacgcagac     600
cagctggcct ccaagctgga ggagacgctg cccgtcatcc gctcagtcag cgaacagttc     660
aaggaccctg agcagacaac tttcatctgc gtatgcattg ctgagttcct gtccctgtat     720
gagacagaga ggctgatcca ggagctggcc aagtgcaaga ttgacacaca caatataatt     780
gtcaaccagc tcgtcttccc cgaccccgag aagccctgca agatgtgtga ggcccgtcac     840
aagatccagg ccaagtatct ggaccagatg gaggacctgt atgaagactt ccacatcgtg     900
aagctgccgc tgttacccca tgaggtgcgg ggggcagaca aggtcaacac cttctcggcc     960
ctcctcctgg agccctacaa gccccccagt gcccagtagc acagctgcca gccccaaccg    1020
ctgccatttc acactcaccc tccaccctcc ccacccccтc ggggcagagt ttgcacaaag    1080
tccccccccat aatacagggg gagccacttg ggcaggaggc agggaggggt ccattccccc    1140
tggtggggct ggtggggagc tgtagttgcc ccctacctct cccacctctt gctcttcaat    1200
aaatgatctt aaactg                                                    1216
```

<210> 692
<211> 1958
<212> DNA
<213> Homo Sapiens

<400> 692

```
gctgctgcgc ccgcggctcc ccagtgcccc gagtgccccg cgggccccgc gagcgggagt      60
gggacccagc cctaggcaga acccaggcgc cgcgcccggg acgcccgcgg agagagccac     120
tcccgcccac gtcccatttc gcccctcgcg tccggagtcc ccgtggccag atctaaccat     180
gagctaccct ggctatcccc cgcccccagg tggctaccca ccagctgcac caggtggtgg     240
tccctgggga ggtgctgcct accctcctcc gcccagcatg ccccccatcg ggctggataa     300
cgtggccacc tatgcggggc agttcaacca ggactatctc tcgggaatgg cggccaacat     360
gtctgggaca tttggaggag ccaacatgcc caacctgtac cctggggccc ctggggctgg     420
ctacccacca gtgcccctg gcggctttgg gcagcccccc tctgcccagc agcctgttcc     480
tccctatggg atgtatccac ccccaggagg aaacccaccc tccaggatgc cctcatatcc     540
gccataccca ggggcccctg tgccgggcca gcccatgcca ccccccggac agcagccccc     600
aggggcctac cctgggcagc caccagtgac ctaccctggt cagcctccag tgccactccc     660
```

```
tgggcagcag cagccagtgc cgagctaccc aggatacccg gggtctggga ctgtcacccc     720
cgctgtgccc ccaacccagt ttggaagccg aggcaccatc actgatgctc ccggctttga     780
ccccctgcga gatgccgagg tcctgcggaa ggccatgaaa ggcttcggga cggatgagca     840
ggccatcatt gactgcctgg ggagtcgctc caacaagcag cggcagcaga tcctactttc     900
cttcaagacg gcttacggca aggatttgat caaagatctg aaatctgaac tgtcaggaaa     960
ctttgagaag acaatcttgg ctctgatgaa gaccccagtc ctctttgaca tttatgagat    1020
aaaggaagcc atcaaggggg ttggcactga tgaagcctgc ctgattgaga tcctcgcttc    1080
ccgcagcaat gagcacatcc gagaattaaa cagagcctac aaagcagaat tcaaaaagac    1140
cctggaagag gccattcgaa gcgacacatc agggcacttc cagcggctcc tcatctctct    1200
ctctcaggga aaccgtgatg aaagcacaaa cgtggacatg tcactcgccc agagagatgc    1260
ccaggagctg tatgcggccg gggagaaccg cctgggaaca gacgagtcca agttcaatgc    1320
ggttctgtgc tcccggagcc gggcccacct ggtagcagtt ttcaatgagt accagagaat    1380
gacaggccgg gacattgaga agagcatctg ccgggagatg tccggggacc tggaggaggg    1440
catgctggcc gtggtgaaat gtctcaagaa taccccagcc ttctttgcgg agaggctcaa    1500
caaggccatg agggggcag gaacaaagga ccggaccctg attcgcatca tggtgtctcg    1560
cagcgagacc gacctcctgg acatcagatc agagtataag cggatgtacg gcaagtcgct    1620
gtaccacgac atctcgggag atacttcagg ggattaccgg aagattctgc tgaagatctg    1680
tggtggcaat gactgaacag tgactggtgg ctcacttctg cccacctgcc ggcaacacca    1740
gtgccaggaa aaggccaaaa gaatgtctgt ttctaacaaa tccacaaata gccccgagat    1800
tcaccgtcct agagcttagg cctgtcttcc acccctcctg acccgtatag tgtgccacag    1860
gacctgggtc ggtctagaac tctctcagga tgccttttct accccatccc tcacagcctc    1920
ttgctgctaa aatagatgtt tcatttttct gaaaaaaa                            1958
```

<210> 693
<211> 505
<212> PRT
<213> Homo Sapiens

<400> 693

```
Met Ser Tyr Pro Gly Tyr Pro Pro Pro Pro Gly Gly Tyr Pro Pro Ala
 1               5                  10                  15
Ala Pro Gly Gly Gly Pro Trp Gly Gly Ala Ala Tyr Pro Pro Pro Pro
            20                  25                  30
Ser Met Pro Pro Ile Gly Leu Asp Asn Val Ala Thr Tyr Ala Gly Gln
        35                  40                  45
Phe Asn Gln Asp Tyr Leu Ser Gly Met Ala Ala Asn Met Ser Gly Thr
    50                  55                  60
Phe Gly Gly Ala Asn Met Pro Asn Leu Tyr Pro Gly Ala Pro Gly Ala
65                  70                  75                  80
Gly Tyr Pro Pro Val Pro Pro Gly Gly Phe Gly Gln Pro Pro Ser Ala
                85                  90                  95
Gln Gln Pro Val Pro Pro Tyr Gly Met Tyr Pro Pro Pro Gly Gly Asn
            100                 105                 110
Pro Pro Ser Arg Met Pro Ser Tyr Pro Pro Tyr Pro Gly Ala Pro Val
        115                 120                 125
Pro Gly Gln Pro Met Pro Pro Pro Gly Gln Gln Pro Pro Gly Ala Tyr
    130                 135                 140
Pro Gly Gln Pro Pro Val Thr Tyr Pro Gly Gln Pro Pro Val Pro Leu
145                 150                 155                 160
Pro Gly Gln Gln Gln Pro Val Pro Ser Tyr Pro Gly Tyr Pro Gly Ser
                165                 170                 175
Gly Thr Val Thr Pro Ala Val Pro Pro Thr Gln Phe Gly Ser Arg Gly
            180                 185                 190
Thr Ile Thr Asp Ala Pro Gly Phe Asp Pro Leu Arg Asp Ala Glu Val
        195                 200                 205
```

```
Leu Arg Lys Ala Met Lys Gly Phe Gly Thr Asp Glu Gln Ala Ile Ile
    210                 215                 220
Asp Cys Leu Gly Ser Arg Ser Asn Lys Gln Arg Gln Gln Ile Leu Leu
225                 230                 235                 240
Ser Phe Lys Thr Ala Tyr Gly Lys Asp Leu Ile Lys Asp Leu Lys Ser
                245                 250                 255
Glu Leu Ser Gly Asn Phe Glu Lys Thr Ile Leu Ala Leu Met Lys Thr
            260                 265                 270
Pro Val Leu Phe Asp Ile Tyr Glu Ile Lys Glu Ala Ile Lys Gly Val
        275                 280                 285
Gly Thr Asp Glu Ala Cys Leu Ile Glu Ile Leu Ala Ser Arg Ser Asn
    290                 295                 300
Glu His Ile Arg Glu Leu Asn Arg Ala Tyr Lys Ala Glu Phe Lys Lys
305                 310                 315                 320
Thr Leu Glu Glu Ala Ile Arg Ser Asp Thr Ser Gly His Phe Gln Arg
                325                 330                 335
Leu Leu Ile Ser Leu Ser Gln Gly Asn Arg Asp Glu Ser Thr Asn Val
            340                 345                 350
Asp Met Ser Leu Ala Gln Arg Asp Ala Gln Glu Leu Tyr Ala Ala Gly
        355                 360                 365
Glu Asn Arg Leu Gly Thr Asp Glu Ser Lys Phe Asn Ala Val Leu Cys
    370                 375                 380
Ser Arg Ser Arg Ala His Leu Val Ala Val Phe Asn Glu Tyr Gln Arg
385                 390                 395                 400
Met Thr Gly Arg Asp Ile Glu Lys Ser Ile Cys Arg Glu Met Ser Gly
                405                 410                 415
Asp Leu Glu Glu Gly Met Leu Ala Val Val Lys Cys Leu Lys Asn Thr
            420                 425                 430
Pro Ala Phe Phe Ala Glu Arg Leu Asn Lys Ala Met Arg Gly Ala Gly
        435                 440                 445
Thr Lys Asp Arg Thr Leu Ile Arg Ile Met Val Ser Arg Ser Glu Thr
    450                 455                 460
Asp Leu Leu Asp Ile Arg Ser Glu Tyr Lys Arg Met Tyr Gly Lys Ser
465                 470                 475                 480
Leu Tyr His Asp Ile Ser Gly Asp Thr Ser Gly Asp Tyr Arg Lys Ile
                485                 490                 495
Leu Leu Lys Ile Cys Gly Gly Asn Asp
            500                 505
```

<210> 694
<211> 1141
<212> DNA
<213> Homo Sapiens

<400> 694

```
cgcagcttgc aaatggcgtc tccctcgctg gagcggccag aaaaaggcgc tggaaaaagt      60
gaatttcgta accagaagcc gaagccggag aaccaagatg aatcagaact ccttacggtt     120
cctgatggtt ggaaggaacc agctttttcc aaagaggaca atcccagagg acttttggag     180
gagagcagtt tcgcaacttt gttcccaaaa tacagggaag cttacttgaa agagtgttgg     240
ccattggtgc agaaagcctt aaatgaacat catgttaatg caaccctgga cctgatcgaa     300
ggcagcatga ctgtttgtac tacaaagaag acttttgatc catatatcat cattagggcc     360
agagatctga taaaactgtt agcaaggagt gtttcatttg aacaggcagt acgaattctt     420
caggatgatg ttgcatgtga catcattaaa ataggttctt tagtaaggaa taaagagaga     480
tttgtaaaac gaagacaacg gcttattggt cccaaaggat ctacattgaa ggcattggaa     540
ctcttaacta attgttacat tatggttcag ggaaacacag tttcagccat tggacctttt     600
```

```
agtggcttaa aagaggttag aaaagtagtc cttgatacta tgaagaatat tcatccaatt     660
tataacatta aaagcttaat gattaagaga gagttggcaa aagattctga attacgatca     720
caaagttggg agagattttt gccacagttc aaacacaaaa atgtgaataa acgcaaggaa     780
ccaaagaaaa aaactgttaa gaaagatata cgccattccc accaccacaa ccagaaagtc     840
agatcgataa agaattggct agtggtgaat actttttgaa ggcaaatcag aagaagcggc     900
agaaaatgaa gcaataaagg ctaaacaagc agaagccatc agtaagagac aagaggaaag     960
aaacaaagca tttattccac ctaaggaaaa accaattgtg aaacctaagg aagcttctac    1020
tgaaactaaa attgatgtgg ccagcatcaa ggaaaaggtt aagaaagcaa agaataagaa    1080
actgggagct cttacagctg aagaaattgc acttaagatg gaggcagatg aaaaaaaaaa    1140
a                                                                    1141
```

<210> 695
<211> 288
<212> PRT
<213> Homo Sapiens

<400> 695

```
Met Ala Ser Pro Ser Leu Glu Arg Pro Glu Lys Gly Ala Gly Lys Ser
 1               5                  10                  15
Glu Phe Arg Asn Gln Lys Pro Lys Pro Glu Asn Gln Asp Glu Ser Glu
            20                  25                  30
Leu Leu Thr Val Pro Asp Gly Trp Lys Glu Pro Ala Phe Ser Lys Glu
        35                  40                  45
Asp Asn Pro Arg Gly Leu Leu Glu Glu Ser Ser Phe Ala Thr Leu Phe
    50                  55                  60
Pro Lys Tyr Arg Glu Ala Tyr Leu Lys Glu Cys Trp Pro Leu Val Gln
65                  70                  75                  80
Lys Ala Leu Asn Glu His His Val Asn Ala Thr Leu Asp Leu Ile Glu
                85                  90                  95
Gly Ser Met Thr Val Cys Thr Thr Lys Lys Thr Phe Asp Pro Tyr Ile
            100                 105                 110
Ile Ile Arg Ala Arg Asp Leu Ile Lys Leu Leu Ala Arg Ser Val Ser
        115                 120                 125
Phe Glu Gln Ala Val Arg Ile Leu Gln Asp Asp Val Ala Cys Asp Ile
    130                 135                 140
Ile Lys Ile Gly Ser Leu Val Arg Asn Lys Glu Arg Phe Val Lys Arg
145                 150                 155                 160
Arg Gln Arg Leu Ile Gly Pro Lys Gly Ser Thr Leu Lys Ala Leu Glu
                165                 170                 175
Leu Leu Thr Asn Cys Tyr Ile Met Val Gln Gly Asn Thr Val Ser Ala
            180                 185                 190
Ile Gly Pro Phe Ser Gly Leu Lys Glu Val Arg Lys Val Val Leu Asp
        195                 200                 205
Thr Met Lys Asn Ile His Pro Ile Tyr Asn Ile Lys Ser Leu Met Ile
    210                 215                 220
Lys Arg Glu Leu Ala Lys Asp Ser Glu Leu Arg Ser Gln Ser Trp Glu
225                 230                 235                 240
Arg Phe Leu Pro Gln Phe Lys His Lys Asn Val Asn Lys Arg Lys Glu
                245                 250                 255
Pro Lys Lys Lys Thr Val Lys Lys Asp Ile Arg His Ser His His His
            260                 265                 270
Asn Gln Lys Val Arg Ser Ile Lys Asn Trp Leu Val Val Asn Thr Phe
        275                 280                 285
```

<210> 696

<211> 1008
<212> DNA
<213> Homo Sapiens

<400> 696
agcaggctag gaagactgca tcagttctta gtaaagatga tgtggcacct gaaagtggtg 60
atactacagt gaagaaacct gaatcaaaga aggaacagac cccagagcat gggaagaaaa 120
aacgtggcag aggaaaagcc caagttaaag caacaaatga atccgaagac gaaatcccac 180
agctggtacc aataggaaag aagactccag ctaatgaaaa agtagagatt caaaaacatg 240
ccacagggaa gaagtctcca gcaaagagtc ctaatcccag cacacctcgt gggaagaaaa 300
agaaaggctt tgccagcatc tgagacccca aaagctgcag agtctgagac cccagggaaa 360
agcccagaga agaagcctaa aatcaaagaa gaggcagtga aggaaaaaag tccttcgctg 420
gggaaaaaag atgcgagaca gactcccaaa aaagccagag gccaagtttt tcaccattcc 480
tagtaaatct gtgagaaaag cttcccacac ccccaaaaaa tggcccaaaa aacccaaagt 540
accccagtcg acctaaagtc agtgattcaa ctggaaggaa acctcaatgc tgcctccaga 600
gctttttgga aatactcaga tcctggccgc ctttgtaacc ttctctaaac gtcaggcctg 660
gacttaaaag atttttaaa acctccataa gtagtccagg ggcggtggct cacgcctgta 720
atcccagcac tttgggaggc cgaggcaggc ggatcacaag gtcaacgaga tcgagaccat 780
cctggccaac atggtgaaac cctgtctgta ccaaaaatac aaaaattaat tgggcatggt 840
ggtggacacc tgtaatccca gctactaggg aggctgaggc aggagaattg cttgaacctg 900
ggaggcggag gttgcagtga gccactgcac tccagcctga tgacagagca agactcagtc 960
tcaaaaataa ataaaaataa taaaacctcc ataagtaatc ctgaaaaa 1008

<210> 697
<211> 685
<212> DNA
<213> Homo Sapiens

<400> 697
acgagctgca ctccagcctg ggcgacagag ggaaactcca tctcaaaaaa aaaaanaaaa 60
aaaaaanaaa aagaaaaaag anaatgccca gcgcggtggc taatgcctgt aaccctagtg 120
agacagccaa gtaaaaacgg ctcccaagac aatctacaag cactgggagg atggggtgca 180
gcaccaaaat gttcacacca tttgcagagg ggaacagcct ggcccctgct gttccaggat 240
agtaaccagg aattcagttg gtgagatgga cagcctgtta gcaggactcc atctcacttt 300
gctgtgttgt tctttttccc ttttgcccaa taaattngta acccctcacc tttcaaagtg 360
tctgcgtgcc taatctttcc ctgccatgtg accagaaccc ggttttgttt acaacaccag 420
cactttggga ggcgaagatg ggctgattgc ttgagctcag gggtttaaga acagcctggg 480
caacatagtg aaaccctagt ttttaccaaa aatacgaaaa ttaaccaggc atgcctgtta 540
tcccagctga ggcacaagaa tcccttgaac ccaggaggcn gaannctaat tnnaacccga 600
aaatttgcnc ccactggccc ccccaggcgg aagctagtga gccgagattg cgccactgca 660
cccctgagac gctgtntcaa aaaaa 685

<210> 698
<211> 1205
<212> DNA
<213> Homo Sapiens

<400> 698
ggcacgaggg tgtaggccgc tgcaggccnc catganccgg cttccggatg actacgaccc 60
ctacgcggtt gaagagccta gcgacgagga gccggctttg agcagctctg aggatgaagt 120
ggatgtgctt ttacatggaa ctcctgacca aaaacgaaaa ctcatcagag aatgtcttac 180
cggagaaagt gaatcatcta gtgaagatga atttgaaaag gagatggaag ctgaattaaa 240
ttctaccatg aaaacaatgg aggacaagtt atcctctctg ggaactggat cttcctcagg 300
aaatggaaaa gttgcaacag ctccgacaag gtactacgat gatatatatt ttgattctga 360
ttccgaggat gaagacagag cagtacaggt gaccaagaaa aaaaagaaga aacaacacaa 420

gattccaaca aatgacgaat tactgtntga tcctgaaaaa gataacagag atcaggcctg 480
ggttgatgca cagagaaggg gttaccatgg tttgggacca cagagatcac gtcaacaaca 540
gcctgttcca aatagtgatg ctgtcttgan ttgtcctgcc tgcatgacca cactttgcct 600
tgattgccaa aggcatgant catacaaaac tcaatataga gcaatgtttg taatgaattg 660
ttctattaac aaagaggagg ttctaagata taaagcctca gagaacagga agaaaaggcg 720
ggtccataag aagatgaggt ctaaccggga agatgctgcc gagaaggcag agacagatgt 780
ggaagaaatc tatcacccag tcatgtgcac tgaatgttcc actgaagtgg cagtctacga 840
caaggatgaa gtctttcatt ttttcaatgt tttagcaagc cattcctaaa cagcccaact 900
ggcatttaat tacccaatac tgtatataag gcaaatatgg acagttactt tcctcttgcc 960
tgttcatatc cttcagtgac attgaggaag cagtgtttct ctttttaaag gagaatagtt 1020
gtcaaccttc attcatctct tacatctctc accctctcct ttttttttte tttgatttte 1080
ccccttattg atgggactga tattcattct gtttttgatg aacatttgga aactgtcggg 1140
ctttttatta aagctctgta gaattaaaat gttctggaat tataagcaaa aaaaaaaaaa 1200
aaaaa 1205

<210> 699
<211> 1427
<212> DNA
<213> Homo Sapiens

<400> 699
anannnctgg agccgcgcgc ctcgcaggtc gacactagtg gatccaaaga attcggcacg 60
agcagtggta gcaaatgaag ccaaactgta tcttgaaaaa cctgttgttc ctttaaatat 120
gatgttgcca caagctgcat tggagactca ttgcagtaat atttccaatg tgccacctac 180
aagagagata cttcaagtct ttcttactga tgtacacatg aaggaagtaa ttcagcagtt 240
cattgatgtc ctgagtgtag cagtcaagaa acgtgtcttg tgtttaccta gggatgaaaa 300
cctgacagca aatgaagttt tgaaaacgtg tgataggaaa gcaaatgttg caatcctgtt 360
ttctgggggc attgattcca tggttattgc aacccttgct gaccgtcata ttcctttaga 420
tgaaccaatt gatcttctta atgtagcttt catagctgaa gaaaagacca tgccaactac 480
ctttaacaga gaagggaata aacagaaaaa taaatgtgaa ataccttcag aagaattctc 540
taaagatgtt gctgctgctg ctgctgacag tcctaataaa catgtcagtg taccagatcg 600
aatcacagga agggcgggac taaaggaact acaagctgtt agcccttccc gaatttggaa 660
ttttgttgaa attaatgttt ctatggaaga actgcagaaa ttaagaagaa ctcgaatatg 720
tcacttaatt cggccattgg atacagtttt ggatgatagc attggctgtg cagtctggtt 780
tgcttctaga ggaattggtt ggttagtggc ccaggaagga gtgaaatcct atcagagcaa 840
tgcaaaggta gttctcactg gaattggtgc agatgagcaa cttgcaggtt attctcgtca 900
tcgtgtccgc tttcagtcgc atgggctgga aggattgaat aaggaaataa tgatggaact 960
gggtcgaatt tcttctagaa atcttggtcg tgatgacaga gttattggtg atcatggaaa 1020
agaagcaaga tttcctttcc tggatgaaaa tgttgtctcc tttctaaatt ctctgccgat 1080
ttgggaaaaa gcaaacttga ctttaccccg aggaattggt gaaaaattac ttttacgcct 1140
tgcagctgtg gaacttggtc ttacagcctc tgctcttctc gccaaacggg ccatgcagtt 1200
tggatcaaga attgcaaaaa tggaaaaaat taatgaaaag gcatctgata aatgtggacg 1260
gctccaaatc atgtccttag aaaatctttc tattgaaaag gagactaaat tgtaatgtga 1320
ttcacaatgt aacaatataa aaataagttt ttatataatt atataaaagt aagatactct 1380
gctgctttac tattgtataa tatagtagtt ttaaagttca aaaaaaa 1427

<210> 700
<211> 1967
<212> DNA
<213> Homo Sapiens

<400> 700
ggcacgaggg aaagaggtac gaaatgatga aggaaaagta attcggttcc attgtaaatt 60
atgcgagtgc agctttaatg atcccaatgc taaggagatg cacttaaaag ggcgaagaca 120
cagacttcaa tataaaaaaa aagtaaatcc agatttgcaa gtagaagtaa agcctagtat 180

tcgagcaaga aagattcaag aagagaaaat gaggaagcaa atgcagaagg aggagtactg 240
gcgaagacga gaagaagagg agcgttggag aatggaaatg agacgttatg aagaggacat 300
gtactggagg agaatggagg aagaacaaca tcattgggat gatcgccgcc gaatgccaga 360
tggaggttat cctcatggtc ctccaggccc attaggcctt ctgggagtcc gaccaggcat 420
gcctcctcag cctcaggggc ctgcaccctt acgtcgtcct gactcatctg atgaccgttt 480
ctgggagtcc gaccaggcat gcctcctcag cctcaggggc ctgcaccctt acgtcgtcct 540
gactcatctg atgaccgtta tgtaatgaca aaacatgcca ccatttatcc aactgaagag 600
gagttacagg cagttcagaa aattgtttct attactgaac gtgctttaaa actcgtttca 660
gacagtttgt ctgaacatga gaagaacaag aacaaagagg gagatgataa gaaagaggga 720
ggtaaagaca gagctttgaa aggagttttg cgagtgggag tatttgcaaa agggattact 780
tctcccggag atagaaatgt caaccttgtt ttgctgtgtc agagaaacct tcaaagacat 840
tattaagccg tattgcagaa aacctaccca aacagcttgc tgttataagc cctgagaagt 900
atgacataaa atgtgctgta tctgaagcgg caataatttt gaattcatgt gtggaaccca 960
aaatgcaagt cactatcaca ctgacatctc caattattcg agaagagaac atgagggaag 1020
gagatgtaac ctcgggtatg gtgaaagacc caccggacgt cttggacagg caaaaatgcc 1080
ttgacgctct ggctgctcta cgccacgcta agtggttcca ggctagagct aatggtctgc 1140
agtcctgtgt gattatcata cgcattcttc gagacctctg tcagcgagtt ccaacttggt 1200
ctgattttcc aagctgggct atggagttac tagtagagaa agcaatcagc agtgcttcta 1260
gccctcagag ccctggggat gcactgagaa gagtttttga atgcatttct tcagggatta 1320
ttcttaaagg tagtcctgga cttctggatc cttgtgaaaa ggatcccttt gataccttgg 1380
caacaatgac tgaccagcag cgtgaagaca tcacatccag tgcacagttt gcattgagac 1440
tccttgcatt ccgccagata cacaaagttc taggcatgga tccattaccg caaatgagcc 1500
aacgttttaa catccacaac aacaggaaac gaagaagaga tagtgatgga gttgatggat 1560
ttgaagctga ggggaaaaaa gacaaaaaag attatgataa cttttaaaaa gtgtctgtaa 1620
atcttcagtg ttaaaaaaac agatgcccat ttgttggctg tttttcattc ataataatgt 1680
ctacattgaa aaatttatca agaatttaaa ggatttcatg gaagaaccaa gtttttctat 1740
gatattaaaa aatgtacagt gttaggtatt atttgaatgg aaagacaccc aaaaaaaaaa 1800
atgtgctccg actaggggga aaacagtagt tccgattttt tcccattatt tttattttat 1860
tttctggttg ccctagcttc ccccctatt tttgtgtctt ttattaacta gtgcattgtc 1920
ttattaaatc ttcactgtat taaaaaaaga aaaaaaaaaa acaaaaa 1967

<210> 701
<211> 3423
<212> DNA
<213> Homo Sapiens

<400> 701
ggtgaagaat gaaatcgtgg cgaatgtggg gaaaagagaa atcttgcaca atactgagaa 60
agaacaacac acagaggaca cagtgaagga ttgtgtggac atagaggtat tcactgctgg 120
tgagaatacc gaggaccaga aatcctctga agacactgcc ccattcctag gaaccttagc 180
aggtgctacc tatgaggaac aggttcaaag ccaaattctt gagagcgctt ctctccctga 240
aaacacagca caggttgagt caaatgaggt catgggtgca ccagatgaca ggaccagaac 300
tccccttgag ccatccaact gttggagtga cttagatggt gggagccaca cagagaatgt 360
gggagaggca gcggtgactc tccccttgag ccatccaact gttggagtga cttagatggt 420
gggagccaca cagagaatgt gggagaggca gcagtgactc aggttgaaga gcaggcaggc 480
acagtggcct cgtgtccttt agggcatagt gatgacacag tttatcatga tgacaaatgt 540
atggtagagg tcccccaaga gttagagaca agcacagggc atagtttgga gaaagaattc 600
accaaccagg aagcagctga gcccaaggag gttccagcgc acagtacaga agtaggtagg 660
gatcacaacg aagaagaggg tgaagaaaca ggattaaggg acgagaaacc aatcaagaca 720
gaattcctgg ttctccagca ggaactgagg gcaactgtca ggaagcgaca ggtccaagta 780
cagtagacac tcaaaatgaa cccttagata tgaaagagcc cgatgaagaa aagagtgacc 840
aacagggaga ggcattggac catcgcagaa gaagacaaag aacaagaaaa aaaaaaaaaa 900
aaaaaaagcg ggttctaggg cgccgggcgc tcgggcctcg gccatggctc acaggccgaa 960
aaggactttt cggcagcgcg cggctgattc cagcgacagc gatggcgccg aggagtcgcc 1020
tgctgagcct ggggcgccga gggaacttcc ggtcccgggt tctgcggagg aagagccgcc 1080

ctctggagga ggccgcgcgc aggtggcggg actgccccac cgggttcggg gccctcgtgg 1140
ccggggccgg gtctgggcga gctcccggcg tgccaccaaa gcggctcccc gcgcggacga 1200
aggctcagaa tccagaaccc ttgatgtgtc cacagatgaa gaggataaaa tacatcactc 1260
ctcagaaagt aaggatgatc agggtttgtc ttctgacagt tctagctctc ttggagaaaa 1320
agaactttca tcaacagtta agatcccaga tgcagctttt attcaggcag cccgcagaaa 1380
acgttgaatt ggccagggcc caagatgact atatttcttt ggatgtacaa catacctcct 1440
ccatctctgt aagcagaaat gaagaaacaa gtgaagaaag tcaggaagat gaaaagcaag 1500
atacttggga acaacagcaa atgaggaaag cagttaaaat catagaggaa agagacatag 1560
atctttcctg tggcagtgga tcttcaaaag tgaagaaatt tgatacttcc atttcatttc 1620
cgccagtaaa tttagaaatt ataaagaagc aattaaatac tagattaaca ttactacagg 1680
aaactcaccg ctcacacctg agggagtatg aaaaatacgt acaagatgtc aaaagctcaa 1740
agagtaccat ccagaaccta gagagttcat caaatcaagc tctaaattgt aaattctata 1800
aaagcatgaa aatttatgtg gaaaatttaa ttgactgcct taatgaaaag attatcaaca 1860
tccaagaaat agaatcatcc atgcatgcac tccttttaaa acaagctatg acctttatga 1920
aacgcaggca agatgaatta aaacatgaat caacgtattt acaacagtta tcacgcaaag 1980
atgagacatc cacaagtgga aacttctcag tagatgaaaa aactcagtgg attttagaag 2040
agattgaatc tcgaaggaca aaaagaagac aagcaagggt gctttctggg aattgtaacc 2100
atcaggaagg aacatctagt gatgatgaac tgccttcagc agagatgatt gacttccaaa 2160
aaagccaagg tgacatttta cagaaacaga agaaagtttt tgaagaagtg caagatgatt 2220
tttgtaacat ccagaatatt ttgttgaaat ttcagcaatg gcgagaaaag tttcctgact 2280
cctattatga agctttcatt agtttatgca taccaaagct tttaaatccc ctaatacgag 2340
ttcagttgat tgattggaat cctcttaagt tggaatccac aggtttaaaa gagatgccat 2400
ggttcaaatc tgtagaagaa tttatggata gcagtgtaga agattcaaag aaggaaagta 2460
gttcagataa aaaagtcttg tctgcaatca tcaacaaaac aattattccc cgacttacag 2520
actttgtaga attcctttgg gatcctttgt caacctcaca gacaacaagt ttaataacac 2580
attgcagagt gattcttgaa gaacattcca cttgtgaaaa tgaagttagt aaaagcagac 2640
aggatttact taaatccatt gtttcaagaa tgaaaaaggc agtagaagat gatgttttta 2700
ttcctctgta tccaaagagt gctgtagaaa acaaaacatc acctcattca aagttccaag 2760
aaagacagtt ctggtcaggc ctaaagctct tccgcaatat tcttctttgg aatggactcc 2820
ttacagatga caccttgcaa gaactaggac tagggaagct gctaaatcgt taccttatta 2880
tagcacttct caatgccaca cctgggccag atgtggttaa aaagtgcaac caggtagcag 2940
catgtctacc agaaaaatgg tttgaaaatt ctgccatgag gacatctatt ccacagctag 3000
aaaacttcat tcagttttta ttgcagtctg cacataaatt atctagaagt gaattcaggg 3060
atgaagtcga agaaataatt cttattttgg tgaaaataaa agctttgaat caagcagaat 3120
ccttcatagg agagcatcac ctagaccatc ttaaatcact aattaaagaa gattgaataa 3180
actttattgg aaaatgctaa aattttaata tagttacact cagttccttt gtttgagaag 3240
aagctggtgc ctctctcttc tttattccct gtaatagaag gtaggatttg aaaaaaagca 3300
ggactccacc tctgtattcc cccgtgcttt accttctggc atcatgaaaa gctgccatga 3360
ttctgtggtg ttctaaggaa ttaaatgcac tggagcttta agagctcaac gtgtttccct 3420
ttg 3423

<210> 702
<211> 1106
<212> DNA
<213> Homo Sapiens

<400> 702
ggcacgagca gagacgctgc aaattgcttg tggacggtgt aggccgctgc aggccaccat 60
gaaaccggct tccggatgac tacgacccct acgcggttga agagcctagc gacgaggagc 120
cggctttgag cagctctgag gatgaagtgg atgtgctttt acatggaact cctgaccaaa 180
aacgaaaact catcagagaa tgtcttaccg gagaaagtga atcatctagt gaagatgaat 240
ttgaaaagga gatggaagct gaattaaatt ctaccatgaa aacaatggag gacaagttat 300
cctctctggg aactggatct tcctcaggaa atggaaaagt tgcaacagct ccgacaaggt 360
actacgatga tatatatttt gattctgatt ccgaggatga agacagagca gtacaggtga 420
ccaagaaaaa aaagaagaaa caacacaaga ttccaacaaa tgacgaatta ctgtatgatc 480

ctgaaaaaga taacagagat caggcctggg ttgatgcaca gagaaggggt taccatggtt 540
tgggaccaca gagatcacgt caacaacagc ctgttccaaa tagtgatgct gtcttgaatt 600
gtcctgcctg catgaccaca ctttgccttg attgccaaag gcatgaatca tacaaaactc 660
natatagagc aatgtttgtt atgaattgtt ctattaacaa agaggaagtt ctaagatatn 720
aagcctcnga naacaggaag aaaaggcggg tccatnaaaa aaataaggtc taaccgggaa 780
gatctgncga naaggcagaa acagatgtgg aaaaaatcta tcncccntcc tgtncgctga 840
atgttccctg aaattggagt ctacaacaag gatnaattct tcnnttttte cntgttttag 900
caagccntcc taaacngccc nctggctttt atttccccat actgttttta agggcaaatt 960
tggacagttc cttncccctt gcccgntcnt ntccctcntt gacttgaagg aaccatnttt 1020
ccnnttttaa gggaaaaaat tgttcacctc cttccccctct taattcctcc ccccncnctt 1080
ttttttcctt gaattncccc cttntg 1106

<210> 703
<211> 1095
<212> DNA
<213> Homo Sapiens

<400> 703
tgccgctcct cttcctcttc ttcttcttct tcttcctctt cttcctagct tccttcacca 60
aatcgcactg gctcctggac tcttttccta tcttcaccac gaactgctgc ttgctcgctt 120
gctcctcagt cctagcttca tcaaacactg gttcctggaa tcctgtctgc tgctgtcttc 180
ctanattcac tgaatccact tctgtgtagc acctgggtca gctgtcaatt aatgctagtc 240
ctcaggattt aaaaaataat cttaactcaa agtccaatgc aaaaacatta agttggtaat 300
tactcttgat cttgaattac ttccgttacg aaagtccttc acatttttca aactaagcta 360
ctatatttaa ggccttccaa attcttctaa ctcttccaaa agccttctgc cttagttttt 420
tttaaattac accagtcctt ttagtagctt tttgatgtga tttttaacca acttcccctt 480
ctagcttcaa gtattcttct aaattggttc tggtctacgt aaacaccctc atcttctcaa 540
gctttacctt ctaacttctg caccaccaga aattaaattg atgggctttt aaaataaatt 600
ggttacaata atttcctcat tttttcagtg ctattttatc caatttttgg ctttatattt 660
ttctatcttc tatacttctc caatactgtc ttagcttgtt tttcattttc tatctgaaac 720
tcttgaaaat aatttcattt tctatcttgt ttctatcttc caaatttttct tctaaatttg 780
tacattttgc ccttaacttt ttggtttcct aacntggtct ttttcctccg cctcctaatt 840
ttcanggttt aaatttatct ttttttcctcc naaaaatttg nttttaanct nccaaattnc 900
ccnaacctnc nctaatccnt ttccttcgcc ttcccgtnat ttcttgtntt ccaattttcc 960
acttcaaatt ctatcttccc aaaatttttt ctnccaacnc cccaaataaa acttcccnnt 1020
tncgtcgggn ttaataaaag ntttaanagg gttaaaagaa annaatcccc cngttttgga 1080
attnangggt ttaaa 1095

<210> 704
<211> 1968
<212> DNA
<213> Homo Sapiens

<400> 704
cggcagccct cctacctgcg cacgtggtgc cgctgctgct gcctcccgct cgccctgaac 60
ccagtgcctg cagccatggc tcccggccag ctcgccttat ttagtgtctc tgacaaaacc 120
ggccttgtgg aatttgcaag aaacctgacc gctcttggtt tgaatctggt cgcttccgga 180
gggactgcaa aagctctcag ggatgctggt ctggcagtca gagatgtctc tgagttgacg 240
ggatttcctg aaatgttggg gggacgtgtg aaaactttgc atcctgcagt ccatgctgga 300
atcctagctc gtaatattcc agaagataat gctgacatgg ccagacttga tttcaatctt 360
ataagagttg ttgcctgcaa tctctatccc tttgtaaaga cagtggcttc tccaggtgta 420
actgttgagg aggctgtgga gcaaattgac attggtggag taaccttact gagagctgca 480
gccaaaaacc acgctcgagt gacagtggtg tgtgaaccag aggactatgt ggtggtgtcc 540
acggagatgc agagctccga gagtaaggac acctccttgg agactagacg ccagttagcc 600
ttgaaggcat tcactcatac ggcacaatat gatgaagcaa tttcagatta tttcaggaaa 660

cagtacagca aaggcgtatc tcagatgccc ttgagatatg gaatgaaccc acatcagacc 720
cctgcccagc tgtacacact gcagcccaag cttcccatca cagttctaaa tggagcccct 780
ggatttataa acttgtgcga tgctttgaac gcctggcagc tggtgaagga actcaaggag 840
gctttaggta ttccagccgc tgcctctttc aaacatgtca gcccagcagg tgctgctgtt 900
ggaattccac tcagtgaaga tgaggccaaa gtctgcatgg tttatgatct ctataaaacc 960
ctcacaccca tctcagcggc atatgcaaga gcaagagggg ctgataggat gtcttcattt 1020
ggtgattttg ttgcattgtc cgatgtttgt gatgtaccaa ctgcaaaaat tatttccaga 1080
gaagtatctg atggtataat tgccccagga tatgaagaag aagccttgac aatactttcc 1140
aaaaagaaaa atggaaacta ttgtgtcctt cagatggacc aatcttacaa accagatgaa 1200
aatgaagttc gaactctctt tggtcttcat ttaagccaga agagaaataa tggtgtcgtc 1260
gacaagtcat tatttagcaa tgttgttacc aaaaataaag atttgccaga gtctgccctc 1320
cgagacctca tcgtagccac cattgctgtc aagtacactc agtctaactc tgtgtgctac 1380
gccaagaacg ggcaggttat cggcattgga gcaggacagc agtctcgtat acactgcact 1440
cgccttgcag gagataaggc aaactattgg tggcttagac accatccaca agtgctttcg 1500
atgaagttta aaacaggagt gaagagagca gaaatctcca atgccatcga tcaatatgtg 1560
actggaacca ttggcgagga tgaagatttg ataaagtgga aggcactgtt tgaggaagtc 1620
cctgagttac tcactgaggc agagaagaag gaatgggttg agaaactgac tgaagtttct 1680
atcagctctg atgccttctt ccctttccga gataacgtag acagagctaa aaggagtggt 1740
gtggcgtaca ttgcggctcc ctccggttct gctgctgaca aagttgtgat tgaggcctgc 1800
gacgaactgg gaatcatcct cgctcatacg aaccttcggc tcttccacca ctgattttac 1860
cacacactgt tttttggctt gcttatgtgt aggtgaacag tcacgcctga aactttgagg 1920
ataacttttt aaaaaaataa aacagtatct cttaatcact ggaaaaaa 1968

<210> 705
<211> 800
<212> DNA
<213> Homo Sapiens

<400> 705
cctgcaggtc gacactaagt gggatccaaa gaattcggca cgagaaaaga agaagactaa 60
gaataaaaag aataaagact caaaagaaga ccaagtccca tatgtggtag aaaaggaaga 120
gcagttgagg aaagaacaag caaatccaca ctcagtcagt agacttataa aagatgatgc 180
aagtgatgtt caagaggatt ctgcaatgga agacaagttc tatagcctgg atgaattgca 240
tattctggac atgatagagc agggctcagc tggcaaagta actacagact atggagaaac 300
tgaaaaggaa aggcttgctc gtcaaaggca gctttataaa ttgcactatc agtgtgaaga 360
tttcaaaaga cagttgagaa cagtgacttt tcggtggcaa gaaaaccaaa tgcagattaa 420
aaagaaagac aaaattatcg catctcttaa tcaacaagtt gcttttggaa tcaataaggt 480
ttccaaatta cagcgtcaaa tccatgctaa agataatgaa atcaagaacc ttaaagagca 540
actttctatg aaaagatctc agtgggaaat ggaaaaacat aatctgggaa agcacaatga 600
aaacatacgt aagcaaactg aacgcagaaa ctagcagagc tttaacagcc gaaggtgtan 660
ttcttacagt gtcgtanggg antttgggtt tgcctcatcc tagagcaaga ctgaaaagga 720
atgtcccaat cagcntgcca agggtgaccc acatggganc caagcaacct agaaancact 780
tcaatttaaa gggctgcggg 800

<210> 706
<211> 487
<212> DNA
<213> Homo Sapiens

<400> 706
caaaggaagc tcagtttttc ttttattatg agctgcttgt ntgagtggtg taaaattatg 60
tgctcttcaa tatagtgcta aagaagccag ctaattttat caaagcagca gccaaagaag 120
tcaggacaaa tcttcaggac ttgtgaaatg aactgaaaga gcttgaagca gatggaattt 180
taatagttac actatatatg ctcttagtag gtttttttct tgtagtggaa acataactgt 240
tagcatattt cttaggatgt tttttcttgt ctttttaaat tcttatttca ctcatccttt 300

actctcccct caagtattct acactttaat ttcctgaaat aaatttaagg aaaagggaaa 360
tagtaaagaa gtaggaatgg gtgcagcaca ccagcatggc acatgaatac acatgtaact 420
aacctgcaca ttgtgcacat gtaccctaaa acttaaagta taataataat aaaaaaaaaa 480
aaaaaaa 487

<210> 707
<211> 3599
<212> DNA
<213> Homo Sapiens

<400> 707
aaggaggagc gggccgtgga ggcttcgccg cctaggtact gctataacca gaatttggta 60
taaaaaggat ttacttgttg gggccctctt gataaaaaga gatgtggggg gattctcgac 120
ctgctaacag aactggacct tttcgtggga gccaagaaga aaggtttgct cccgggtgga 180
acagggatta tcctcctcct ccccttaaga gtcatgctca agagagacac tctggcaact 240
ttcctggcag agattcactt ccctttgatt tccaggggca ttcggggcct ccttttgcaa 300
atgtagagga gcattctttc agctatggag ctagagacgg accgcatggt gactatcgag 360
gaggggaggg acctggacat gatttcaggg ggggagattt ttcgtcttct gatttccaga 420
gcagagattc atcacagttg gacttcaggg gtagggacat acattctggg gattttcggg 480
atagagaagg accacctatg gactataggg gtggagatgg tacttctatg gattatagag 540
gtagggaggc acctcatatg aactacagag acagggatgc tcacgctgtt gacttcagag 600
gtagggatgc tcctccatct gacttcaggg gccggggcac ttatgattta gattttagag 660
gccgggatgg atcccatgca gattttaggg gaagggattt atcagatttg gattttaggg 720
ccagagaaca gtcccgttct gattttagga atagagatgt atctgatttg gactttagag 780
acaaagacgg aacacaagta gactttagag gccgaggttc aggtactact gatctagact 840
ttagggacag ggatacgcca cattcagatt tcagaggtag acaccgatct aggactgatc 900
aggattttag gggcagagag atgggatctt gtatggaatt taaagatagg gagatgcccc 960
ctgtggatcc aaatattttg gattacattc agccctctac acaagataga gaacattctg 1020
gtatgaatgt gaacaggaga gaagaatcca cacacgacca tacgatagaa aggcctgctt 1080
ttggcattca gaagggagaa tttgagcatt cagaaacaag agaaggagaa acacaaggtg 1140
tagcctttga acatgagtct ccagcagact ttcagaacag ccaaagtcca gttcaagacc 1200
aagataagtc acagctttct ggacgtgaag agcagagttc agatgctggt ctgtttaaag 1260
aagaaggcgg tctggacttt cttgggcggc aagacaccga ttacagaagc atggagtacc 1320
gtgatgtgga tcataggctg ccaggaagcc agatgtttgg ctatggccag agcaagtctt 1380
ttccagaggg caaaactgcc cgagatgccc aacgggacct tcaggatcaa gattatagga 1440
ccggcccaag tgaggagaaa cccagcaggc ttattcgatt aagtggggta cctgaagatg 1500
ccacaaaaga agagattctt aatgcttttc ggactcctga tggcatgcct gtaaagaact 1560
tgcagttgaa ggagtataac acaggttacg actatggcta tgtctgcgtg gagttttcac 1620
tcttggaaga tgccatcgga tgcatggagg ccaaccaggg aactctaatg atccaggaca 1680
aagaagttac cctggagtat gtatcaagcc tggatttttg gtactgcaaa cgatgtaagg 1740
caaacattgg tgggcaccga tcttcctgtt cattctgcaa gaacccaaga gaagtgacag 1800
aggccaagca agaattaata acctaccctc agcctcagaa aacatccata ccagcaccat 1860
tggaaaaaca gcccaaccag cccctaagac cagctgataa ggaacctgaa cccaggaaga 1920
gggaagaagg ccaagagtca cgcttaggac atcaaaagag agaagcagaa aggtatctgc 1980
ctccttctcg aagggaaggg ccaactttcc gaagagaccg agagagggag tcatggtctg 2040
gagagacacg ccaggatgga gagagcaaaa ctatcatgct aaagcgtatc tatcgttcca 2100
caccacctga ggtgatagtg gaagtgctgg agccctatgt ccgccttact actgccaacg 2160
tccgtatcat caagaacaga acaggcccta tggggcatac ctatggcttt attgacctcg 2220
actcccatgt ggaagctctt cgtgtggtga agatcttaca gaaccttgat ccgccattta 2280
gcattgatgg gaagatggta gctgtaaacc tggccactgg aaaacgaaga aatgattctg 2340
gggaccattc tgaccacatg cattactatc agggtaaaaa atatttccga gataggaggg 2400
gaggtggcag aaattcagac tggtcttcag atacaaatcg acaaggacaa cagtcatcat 2460
ctgactgcta catatatgat tctgctagtg gctactatta tgacccctg gcaggaactt 2520
attatgaccc caatacccag caagaagtct atgtgcccca ggatcctgga ttacctgagg 2580
aagaagagat caaggaaaaa aaacccacca gtcaaggaaa gtcaagtagc aagaaggaaa 2640

```
tgtctaaaag agatggcaag gagaaaaaag acagaggagt gacgaggttt caggaaaatg    2700
ccagtgaagg gaaggcccct gcagaagacg tctttaagaa gcccctgcct cctactgtga    2760
agaaggaaga gagtcccccc ccacctaaag tggtaaaccc actgatcggc ctcttgggtg    2820
aatatggagg agacagtgac tatgaggagg aagaagagga ggaacagacc cctcccccac    2880
agccccgcac agcacagccc cagaagcgag aggagcaaac caagaaggag aatgaagaag    2940
acaaactcac tgactggaat aaactggctt gtctgctttg cagaaggcag tttcccaata    3000
aagaagttct gatcaaacac cagcagctgt cagacctgca caagcaaaac ctggaaatcc    3060
accggaagat aaaacagtct gagcaggagc tagcctatct ggaaaggaga gaacgagagg    3120
gaaagtttaa aggaagagga aatgatcgca gggaaaagct ccagtctttt gactctccag    3180
aaaggaaacg gattaagtac tccagggaaa ctgacagtga tcgtaaactt gttgataaag    3240
aagatatcga cactagcagc aaaggaggct gtgtccaaca ggctactggc tggaggaaag    3300
ggacaggcct gggatatggc catcctggat tggcttcatc agaggaggct gaaggccgga    3360
tgaggggccc cagtgttgga gcctcaggaa gaaccagcaa aagacagtcc aacgagactt    3420
atcgagatgc tgttcgaaga gtcatgtttg ctcgatataa agaactcgat taagaaagga    3480
gacaagttcc atgggataca acctccctct tgttttgttt gtctctcctt ttcttttgtt    3540
actgttcttg ctgctagaac ttttttaaat aaacttttt tcaatgtgat taaaaaaaa      3599
```

<210> 708
<211> 1123
<212> PRT
<213> Homo Sapiens

<400> 708

```
Met Trp Gly Asp Ser Arg Pro Ala Asn Arg Thr Gly Pro Phe Arg Gly
 1               5                  10                  15
Ser Gln Glu Glu Arg Phe Ala Pro Gly Trp Asn Arg Asp Tyr Pro Pro
            20                  25                  30
Pro Pro Leu Lys Ser His Ala Gln Glu Arg His Ser Gly Asn Phe Pro
        35                  40                  45
Gly Arg Asp Ser Leu Pro Phe Asp Phe Gln Gly His Ser Gly Pro Pro
    50                  55                  60
Phe Ala Asn Val Glu Glu His Ser Phe Ser Tyr Gly Ala Arg Asp Gly
65                  70                  75                  80
Pro His Gly Asp Tyr Arg Gly Gly Glu Gly Pro Gly His Asp Phe Arg
                85                  90                  95
Gly Gly Asp Phe Ser Ser Ser Asp Phe Gln Ser Arg Asp Ser Ser Gln
            100                 105                 110
Leu Asp Phe Arg Gly Arg Asp Ile His Ser Gly Asp Phe Arg Asp Arg
        115                 120                 125
Glu Gly Pro Pro Met Asp Tyr Arg Gly Gly Asp Gly Thr Ser Met Asp
    130                 135                 140
Tyr Arg Gly Arg Glu Ala Pro His Met Asn Tyr Arg Asp Arg Asp Ala
145                 150                 155                 160
His Ala Val Asp Phe Arg Gly Arg Asp Ala Pro Pro Ser Asp Phe Arg
                165                 170                 175
Gly Arg Gly Thr Tyr Asp Leu Asp Phe Arg Gly Arg Asp Gly Ser His
            180                 185                 190
Ala Asp Phe Arg Gly Arg Asp Leu Ser Asp Leu Asp Phe Arg Ala Arg
        195                 200                 205
Glu Gln Ser Arg Ser Asp Phe Arg Asn Arg Asp Val Ser Asp Leu Asp
    210                 215                 220
Phe Arg Asp Lys Asp Gly Thr Gln Val Asp Phe Arg Gly Arg Gly Ser
225                 230                 235                 240
Gly Thr Thr Asp Leu Asp Phe Arg Asp Arg Asp Thr Pro His Ser Asp
                245                 250                 255
```

```
Phe Arg Gly Arg His Arg Ser Arg Thr Asp Gln Asp Phe Arg Gly Arg
            260                 265                 270
Glu Met Gly Ser Cys Met Glu Phe Lys Asp Arg Glu Met Pro Pro Val
        275                 280                 285
Asp Pro Asn Ile Leu Asp Tyr Ile Gln Pro Ser Thr Gln Asp Arg Glu
    290                 295                 300
His Ser Gly Met Asn Val Asn Arg Arg Glu Glu Ser Thr His Asp His
305                 310                 315                 320
Thr Ile Glu Arg Pro Ala Phe Gly Ile Gln Lys Gly Glu Phe Glu His
                325                 330                 335
Ser Glu Thr Arg Glu Gly Glu Thr Gln Gly Val Ala Phe Glu His Glu
            340                 345                 350
Ser Pro Ala Asp Phe Gln Asn Ser Gln Ser Pro Val Gln Asp Gln Asp
        355                 360                 365
Lys Ser Gln Leu Ser Gly Arg Glu Glu Gln Ser Ser Asp Ala Gly Leu
    370                 375                 380
Phe Lys Glu Glu Gly Gly Leu Asp Phe Leu Gly Arg Gln Asp Thr Asp
385                 390                 395                 400
Tyr Arg Ser Met Glu Tyr Arg Asp Val Asp His Arg Leu Pro Gly Ser
                405                 410                 415
Gln Met Phe Gly Tyr Gly Gln Ser Lys Ser Phe Pro Glu Gly Lys Thr
            420                 425                 430
Ala Arg Asp Ala Gln Arg Asp Leu Gln Asp Gln Asp Tyr Arg Thr Gly
        435                 440                 445
Pro Ser Glu Glu Lys Pro Ser Arg Leu Ile Arg Leu Ser Gly Val Pro
    450                 455                 460
Glu Asp Ala Thr Lys Glu Glu Ile Leu Asn Ala Phe Arg Thr Pro Asp
465                 470                 475                 480
Gly Met Pro Val Lys Asn Leu Gln Leu Lys Glu Tyr Asn Thr Gly Tyr
                485                 490                 495
Asp Tyr Gly Tyr Val Cys Val Glu Phe Ser Leu Leu Glu Asp Ala Ile
            500                 505                 510
Gly Cys Met Glu Ala Asn Gln Gly Thr Leu Met Ile Gln Asp Lys Glu
        515                 520                 525
Val Thr Leu Glu Tyr Val Ser Ser Leu Asp Phe Trp Tyr Cys Lys Arg
    530                 535                 540
Cys Lys Ala Asn Ile Gly Gly His Arg Ser Ser Cys Ser Phe Cys Lys
545                 550                 555                 560
Asn Pro Arg Glu Val Thr Glu Ala Lys Gln Glu Leu Ile Thr Tyr Pro
                565                 570                 575
Gln Pro Gln Lys Thr Ser Ile Pro Ala Pro Leu Glu Lys Gln Pro Asn
            580                 585                 590
Gln Pro Leu Arg Pro Ala Asp Lys Glu Pro Glu Pro Arg Lys Arg Glu
        595                 600                 605
Glu Gly Gln Glu Ser Arg Leu Gly His Gln Lys Arg Glu Ala Glu Arg
    610                 615                 620
Tyr Leu Pro Pro Ser Arg Arg Glu Gly Pro Thr Phe Arg Arg Asp Arg
625                 630                 635                 640
Glu Arg Glu Ser Trp Ser Gly Glu Thr Arg Gln Asp Gly Glu Ser Lys
                645                 650                 655
Thr Ile Met Leu Lys Arg Ile Tyr Arg Ser Thr Pro Pro Glu Val Ile
            660                 665                 670
Val Glu Val Leu Glu Pro Tyr Val Arg Leu Thr Thr Ala Asn Val Arg
        675                 680                 685
Ile Ile Lys Asn Arg Thr Gly Pro Met Gly His Thr Tyr Gly Phe Ile
```

```
    690                 695                 700
Asp Leu Asp Ser His Val Glu Ala Leu Arg Val Val Lys Ile Leu Gln
705                 710                 715                 720
Asn Leu Asp Pro Pro Phe Ser Ile Asp Gly Lys Met Val Ala Val Asn
                725                 730                 735
Leu Ala Thr Gly Lys Arg Arg Asn Asp Ser Gly Asp His Ser Asp His
            740                 745                 750
Met His Tyr Tyr Gln Gly Lys Lys Tyr Phe Arg Asp Arg Arg Gly Gly
        755                 760                 765
Gly Arg Asn Ser Asp Trp Ser Ser Asp Thr Asn Arg Gln Gly Gln Gln
    770                 775                 780
Ser Ser Ser Asp Cys Tyr Ile Tyr Asp Ser Ala Ser Gly Tyr Tyr Tyr
785                 790                 795                 800
Asp Pro Leu Ala Gly Thr Tyr Tyr Asp Pro Asn Thr Gln Gln Glu Val
                805                 810                 815
Tyr Val Pro Gln Asp Pro Gly Leu Pro Glu Glu Glu Glu Ile Lys Glu
            820                 825                 830
Lys Lys Pro Thr Ser Gln Gly Lys Ser Ser Ser Lys Lys Glu Met Ser
        835                 840                 845
Lys Arg Asp Gly Lys Glu Lys Lys Asp Arg Gly Val Thr Arg Phe Gln
    850                 855                 860
Glu Asn Ala Ser Glu Gly Lys Ala Pro Ala Glu Asp Val Phe Lys Lys
865                 870                 875                 880
Pro Leu Pro Pro Thr Val Lys Lys Glu Glu Ser Pro Pro Pro Pro Lys
                885                 890                 895
Val Val Asn Pro Leu Ile Gly Leu Leu Gly Glu Tyr Gly Gly Asp Ser
            900                 905                 910
Asp Tyr Glu Glu Glu Glu Glu Glu Glu Gln Thr Pro Pro Pro Gln Pro
        915                 920                 925
Arg Thr Ala Gln Pro Gln Lys Arg Glu Glu Gln Thr Lys Lys Glu Asn
    930                 935                 940
Glu Glu Asp Lys Leu Thr Asp Trp Asn Lys Leu Ala Cys Leu Leu Cys
945                 950                 955                 960
Arg Arg Gln Phe Pro Asn Lys Glu Val Leu Ile Lys His Gln Gln Leu
                965                 970                 975
Ser Asp Leu His Lys Gln Asn Leu Glu Ile His Arg Lys Ile Lys Gln
            980                 985                 990
Ser Glu Gln Glu Leu Ala Tyr Leu Glu Arg Arg Glu Arg Glu Gly Lys
        995                 1000                1005
Phe Lys Gly Arg Gly Asn Asp Arg Arg Glu Lys Leu Gln Ser Phe Asp
    1010                1015                1020
Ser Pro Glu Arg Lys Arg Ile Lys Tyr Ser Arg Glu Thr Asp Ser Asp
1025                1030                1035                104
Arg Lys Leu Val Asp Lys Glu Asp Ile Asp Thr Ser Ser Lys Gly Gly
                1045                1050                1055
Cys Val Gln Gln Ala Thr Gly Trp Arg Lys Gly Thr Gly Leu Gly Tyr
            1060                1065                1070
Gly His Pro Gly Leu Ala Ser Ser Glu Glu Ala Glu Gly Arg Met Arg
        1075                1080                1085
Gly Pro Ser Val Gly Ala Ser Gly Arg Thr Ser Lys Arg Gln Ser Asn
    1090                1095                1100
Glu Thr Tyr Arg Asp Ala Val Arg Arg Val Met Phe Ala Arg Tyr Lys
1105                1110                1115                112
Glu Leu Asp
```

<210> 709
<211> 3807
<212> DNA
<213> Homo Sapiens

<400> 709
aaggaggagc gggccgtgga ggcttcgccg cctaggtact gctataacca gaatttggta 60
taaaaaggat ttacttgttg gggccctctt gataaaaaga gatgtggggg gattctcgac 120
ctgctaacag aactggacct tttcgagatg gcgtttcgcc gtgttggccg ggctggtctc 180
ggactcctga cctcaagtga tccacctacc tcggcctccc aaagtgctgg gactataggt 240
gtgagccacc gcacctgcca tttggattgg caatctgcaa gattttatta cttaaatgca 300
acagatgttc tcattcattg ttctgaagct tggagttcca atgaaaaatt tagtgggagc 360
caagaagaaa ggtttgctcc cgggtggaac agggattatc ctcctcctcc ccttaagagt 420
catgctcaag agagacactc tggcaacttt cctggcagag attcacttcc ctttgatttc 480
caggggcatt cggggcctcc ttttgcaaat gtagaggagc attctttcag ctatggagct 540
agagacggac cgcatggtga ctatcgagga ggggagggac ctggacatga tttcaggggg 600
ggagattttt cgtcttctga tttccagagc agagattcat cacagttgga cttcaggggt 660
agggacatac attctgggga ttttcgggat agagaaggac cacctatgga ctataggggt 720
ggagatggta cttctatgga ttatagaggt agggaggcac ctcatatgaa ctacagagac 780
agggatgctc acgctgttga cttcagaggt agggatgctc ctccatctga cttcaggggc 840
cggggcactt atgatttaga ttttagaggc cgggatggat cccatgcaga ttttagggga 900
agggatttat cagatttgga ttttagggcc agagaacagt cccgttctga ttttaggaat 960
agagatgtat ctgatttgga ctttagagac aaagacggaa cacaagtaga ctttagaggc 1020
cgaggttcag gtactactga tctagacttt agggacaggg atacgccaca ttcagatttc 1080
agaggtagac accgatctag gactgatcag gattttaggg gcagagagat gggatcttgt 1140
atggaattta aagataggga gatgcccccc gtggatccaa atattttgga ttacattcag 1200
ccctctacac aagatagaga acattctggt atgaatgtga acaggagaga agaatccaca 1260
cacgaccata cgatagaaag gcctgctttt ggcattcaga agggagaatt tgagcattca 1320
gaaacaagag aaggagaaac acaaggtgta gcctttgaac atgagtctcc agcagacttt 1380
cagaacagcc aaagtccagt tcaagaccaa gataagtcac agctttctgg acgtgaagag 1440
cagagttcag atgctggtct gtttaaagaa gaaggcggtc tggactttct tgggcggcaa 1500
gacaccgatt acagaagcat ggagtaccgt gatgtggatc ataggctgcc aggaagccag 1560
atgtttggct atggccagag caagtctttt ccagagggca aaactgcccg agatgcccaa 1620
cgggaccttc aggatcaaga ttataggacc ggcccaagtg aggagaaacc cagcaggctt 1680
attcgattaa gtggggtacc tgaagatgcc acaaaagaag agattcttaa tgcttttcgg 1740
actcctgatg gcatgcctgt aaagaacttg cagttgaagg agtataacac aggttacgac 1800
tatggctatg tctgcgtgga gttttcactc ttggaagatg ccatcggatg catggaggcc 1860
aaccagggaa ctctaatgat ccaggacaaa gaagttaccc tggagtatgt atcaagcctg 1920
gatttttggt actgcaaacg atgtaaggca aacattggtg ggcaccgatc ttcctgttca 1980
ttctgcaaga acccaagaga agtgacagag gccaagcaag aattaataac ctaccctcag 2040
cctcagaaaa catccatacc agcaccattg gaaaaacagc ccaaccagcc cctaagacca 2100
gctgataagg aacctgaacc caggaagagg gaagaaggcc aagagtcacg cttaggacat 2160
caaaagagag aagcagaaag gtatctgcct ccttctcgaa gggaagggcc aactttccga 2220
agagaccgag agagggagtc atggtctgga gagacacgcc aggatggaga gagcaaaact 2280
atcatgctaa agcgtatcta tcgttccaca ccacctgagg tgatagtgga agtgctggag 2340
ccctatgtcc gccttactac tgccaacgtc cgtatcatca agaacagaac aggccctatg 2400
gggcatacct atggctttat tgacctcgac tcccatgtgg aagctcttcg tgtggtgaag 2460
atcttacaga accttgatcc gccatttagc attgatggga agatggtagc tgtaaacctg 2520
gccactggaa aacgaagaaa tgattctggg gaccattctg accacatgca ttactatcag 2580
ggtaaaaaat atttccgaga taggagggga ggtggcagaa attcagactg gtcttcagat 2640
acaaatcgac aaggacaaca gtcatcatct gactgctaca tatatgattc tgctagtggc 2700
tactattatg acccctggc aggaacttat tatgacccca atacccagca agaagtctat 2760
gtgccccagg atcctggatt acctgaggaa gaagagatca aggaaaaaaa acccaccagt 2820
caaggaaagt caagtagcaa gaaggaaatg tctaaaagag atggcaagga gaaaaaagac 2880
agaggagtga cgaggtttca ggaaaatgcc agtgaaggga aggcccctgc agaagacgtc 2940

```
tttaagaagc ccctgcctcc tactgtgaag aaggaagaga gtccccctcc acctaaagtg    3000
gtaaacccac tgatcggcct cttgggtgaa tatggaggag acagtgacta tgaggaggaa    3060
gaagaggagg aacagacccc tcccccacag ccccgcacag cacagcccca gaagcgagag    3120
gagcaaacca agaaggagaa tgaagaagac aaactcactg actggaataa actggcttgt    3180
ctgctttgca gaaggcagtt tcccaataaa gaagttctga tcaaacacca gcagctgtca    3240
gacctgcaca agcaaaacct ggaaatccac cggaagataa aacagtctga gcaggagcta    3300
gcctatctgg aaaggagaga acgagaggga aagtttaaag gaagaggaaa tgatcgcagg    3360
gaaaagctcc agtcttttga ctctccagaa aggaaacgga ttaagtactc cagggaaact    3420
gacagtgatc gtaaacttgt tgataaagaa gatatcgaca ctagcagcaa aggaggctgt    3480
gtccaacagg ctactggctg gaggaaaggg acaggcctgg gatatggcca tcctggattg    3540
gcttcatcag aggaggctga aggccggatg aggggcccca gtgttggagc ctcaggaaga    3600
accagcaaaa gacagtccaa cgagacttat cgagatgctg ttcgaagagt catgtttgct    3660
cgatataaag aactcgatta agaaaggaga caagttccat gggatacaac ctccctcttg    3720
ttttgtttgt ctctcctttt cttttgttac tgttcttgct gctagaactt ttttaaataa    3780
actttttttc aatgtgatta aaaaaaa                                       3807
```

<210> 710
<211> 1177
<212> PRT
<213> Homo Sapiens

<400> 710

```
Met Ala Phe Arg Arg Val Gly Arg Ala Gly Leu Gly Leu Leu Thr Ser
 1               5                  10                  15
Ser Asp Pro Pro Thr Ser Ala Ser Gln Ser Ala Gly Thr Ile Gly Val
            20                  25                  30
Ser His Arg Thr Cys His Leu Asp Trp Gln Ser Ala Arg Phe Tyr Tyr
        35                  40                  45
Leu Asn Ala Thr Asp Val Leu Ile His Cys Ser Glu Ala Trp Ser Ser
    50                  55                  60
Asn Glu Lys Phe Ser Gly Ser Gln Glu Glu Arg Phe Ala Pro Gly Trp
65                  70                  75                  80
Asn Arg Asp Tyr Pro Pro Pro Pro Leu Lys Ser His Ala Gln Glu Arg
                85                  90                  95
His Ser Gly Asn Phe Pro Gly Arg Asp Ser Leu Pro Phe Asp Phe Gln
            100                 105                 110
Gly His Ser Gly Pro Pro Phe Ala Asn Val Glu Glu His Ser Phe Ser
        115                 120                 125
Tyr Gly Ala Arg Asp Gly Pro His Gly Asp Tyr Arg Gly Gly Glu Gly
    130                 135                 140
Pro Gly His Asp Phe Arg Gly Gly Asp Phe Ser Ser Ser Asp Phe Gln
145                 150                 155                 160
Ser Arg Asp Ser Ser Gln Leu Asp Phe Arg Gly Arg Asp Ile His Ser
                165                 170                 175
Gly Asp Phe Arg Asp Arg Glu Gly Pro Pro Met Asp Tyr Arg Gly Gly
            180                 185                 190
Asp Gly Thr Ser Met Asp Tyr Arg Gly Arg Glu Ala Pro His Met Asn
        195                 200                 205
Tyr Arg Asp Arg Asp Ala His Ala Val Asp Phe Arg Gly Arg Asp Ala
    210                 215                 220
Pro Pro Ser Asp Phe Arg Gly Arg Gly Thr Tyr Asp Leu Asp Phe Arg
225                 230                 235                 240
Gly Arg Asp Gly Ser His Ala Asp Phe Arg Gly Arg Asp Leu Ser Asp
                245                 250                 255
Leu Asp Phe Arg Ala Arg Glu Gln Ser Arg Ser Asp Phe Arg Asn Arg
```

```
            260                 265                 270
Asp Val Ser Asp Leu Asp Phe Arg Asp Lys Asp Gly Thr Gln Val Asp
        275                 280                 285
Phe Arg Gly Arg Gly Ser Gly Thr Thr Asp Leu Asp Phe Arg Asp Arg
    290                 295                 300
Asp Thr Pro His Ser Asp Phe Arg Gly Arg His Arg Ser Arg Thr Asp
305                 310                 315                 320
Gln Asp Phe Arg Gly Arg Glu Met Gly Ser Cys Met Glu Phe Lys Asp
                325                 330                 335
Arg Glu Met Pro Pro Val Asp Pro Asn Ile Leu Asp Tyr Ile Gln Pro
            340                 345                 350
Ser Thr Gln Asp Arg Glu His Ser Gly Met Asn Val Asn Arg Arg Glu
        355                 360                 365
Glu Ser Thr His Asp His Thr Ile Glu Arg Pro Ala Phe Gly Ile Gln
    370                 375                 380
Lys Gly Glu Phe Glu His Ser Glu Thr Arg Glu Gly Glu Thr Gln Gly
385                 390                 395                 400
Val Ala Phe Glu His Glu Ser Pro Ala Asp Phe Gln Asn Ser Gln Ser
                405                 410                 415
Pro Val Gln Asp Gln Asp Lys Ser Gln Leu Ser Gly Arg Glu Glu Gln
            420                 425                 430
Ser Ser Asp Ala Gly Leu Phe Lys Glu Glu Gly Gly Leu Asp Phe Leu
        435                 440                 445
Gly Arg Gln Asp Thr Asp Tyr Arg Ser Met Glu Tyr Arg Asp Val Asp
    450                 455                 460
His Arg Leu Pro Gly Ser Gln Met Phe Gly Tyr Gly Gln Ser Lys Ser
465                 470                 475                 480
Phe Pro Glu Gly Lys Thr Ala Arg Asp Ala Gln Arg Asp Leu Gln Asp
                485                 490                 495
Gln Asp Tyr Arg Thr Gly Pro Ser Glu Glu Lys Pro Ser Arg Leu Ile
            500                 505                 510
Arg Leu Ser Gly Val Pro Glu Asp Ala Thr Lys Glu Glu Ile Leu Asn
        515                 520                 525
Ala Phe Arg Thr Pro Asp Gly Met Pro Val Lys Asn Leu Gln Leu Lys
    530                 535                 540
Glu Tyr Asn Thr Gly Tyr Asp Tyr Gly Tyr Val Cys Val Glu Phe Ser
545                 550                 555                 560
Leu Leu Glu Asp Ala Ile Gly Cys Met Glu Ala Asn Gln Gly Thr Leu
                565                 570                 575
Met Ile Gln Asp Lys Glu Val Thr Leu Glu Tyr Val Ser Ser Leu Asp
            580                 585                 590
Phe Trp Tyr Cys Lys Arg Cys Lys Ala Asn Ile Gly Gly His Arg Ser
        595                 600                 605
Ser Cys Ser Phe Cys Lys Asn Pro Arg Glu Val Thr Glu Ala Lys Gln
    610                 615                 620
Glu Leu Ile Thr Tyr Pro Gln Pro Gln Lys Thr Ser Ile Pro Ala Pro
625                 630                 635                 640
Leu Glu Lys Gln Pro Asn Gln Pro Leu Arg Pro Ala Asp Lys Glu Pro
                645                 650                 655
Glu Pro Arg Lys Arg Glu Glu Gly Gln Glu Ser Arg Leu Gly His Gln
            660                 665                 670
Lys Arg Glu Ala Glu Arg Tyr Leu Pro Pro Ser Arg Arg Glu Gly Pro
        675                 680                 685
Thr Phe Arg Arg Asp Arg Glu Arg Glu Ser Trp Ser Gly Glu Thr Arg
    690                 695                 700
```

```
Gln Asp Gly Glu Ser Lys Thr Ile Met Leu Lys Arg Ile Tyr Arg Ser
705                 710                 715                 720
Thr Pro Pro Glu Val Ile Val Glu Val Leu Glu Pro Tyr Val Arg Leu
                725                 730                 735
Thr Thr Ala Asn Val Arg Ile Ile Lys Asn Arg Thr Gly Pro Met Gly
            740                 745                 750
His Thr Tyr Gly Phe Ile Asp Leu Asp Ser His Val Glu Ala Leu Arg
        755                 760                 765
Val Val Lys Ile Leu Gln Asn Leu Asp Pro Pro Phe Ser Ile Asp Gly
    770                 775                 780
Lys Met Val Ala Val Asn Leu Ala Thr Gly Lys Arg Arg Asn Asp Ser
785                 790                 795                 800
Gly Asp His Ser Asp His Met His Tyr Tyr Gln Gly Lys Lys Tyr Phe
                805                 810                 815
Arg Asp Arg Arg Gly Gly Gly Arg Asn Ser Asp Trp Ser Ser Asp Thr
            820                 825                 830
Asn Arg Gln Gly Gln Gln Ser Ser Ser Asp Cys Tyr Ile Tyr Asp Ser
        835                 840                 845
Ala Ser Gly Tyr Tyr Tyr Asp Pro Leu Ala Gly Thr Tyr Tyr Asp Pro
    850                 855                 860
Asn Thr Gln Gln Glu Val Tyr Val Pro Gln Asp Pro Gly Leu Pro Glu
865                 870                 875                 880
Glu Glu Glu Ile Lys Glu Lys Lys Pro Thr Ser Gln Gly Lys Ser Ser
                885                 890                 895
Ser Lys Lys Glu Met Ser Lys Arg Asp Gly Lys Glu Lys Lys Asp Arg
            900                 905                 910
Gly Val Thr Arg Phe Gln Glu Asn Ala Ser Glu Gly Lys Ala Pro Ala
        915                 920                 925
Glu Asp Val Phe Lys Lys Pro Leu Pro Pro Thr Val Lys Lys Glu Glu
    930                 935                 940
Ser Pro Pro Pro Pro Lys Val Val Asn Pro Leu Ile Gly Leu Leu Gly
945                 950                 955                 960
Glu Tyr Gly Gly Asp Ser Asp Tyr Glu Glu Glu Glu Glu Glu Glu Gln
                965                 970                 975
Thr Pro Pro Pro Gln Pro Arg Thr Ala Gln Pro Gln Lys Arg Glu Glu
            980                 985                 990
Gln Thr Lys Lys Glu Asn Glu Glu Asp Lys Leu Thr Asp Trp Asn Lys
        995                 1000                1005
Leu Ala Cys Leu Leu Cys Arg Arg Gln Phe Pro Asn Lys Glu Val Leu
    1010                1015                1020
Ile Lys His Gln Gln Leu Ser Asp Leu His Lys Gln Asn Leu Glu Ile
1025                1030                1035                104
His Arg Lys Ile Lys Gln Ser Glu Gln Glu Leu Ala Tyr Leu Glu Arg
                1045                1050                1055
Arg Glu Arg Glu Gly Lys Phe Lys Gly Arg Gly Asn Asp Arg Arg Glu
            1060                1065                1070
Lys Leu Gln Ser Phe Asp Ser Pro Glu Arg Lys Arg Ile Lys Tyr Ser
        1075                1080                1085
Arg Glu Thr Asp Ser Asp Arg Lys Leu Val Asp Lys Glu Asp Ile Asp
    1090                1095                1100
Thr Ser Ser Lys Gly Gly Cys Val Gln Gln Ala Thr Gly Trp Arg Lys
1105                1110                1115                112
Gly Thr Gly Leu Gly Tyr Gly His Pro Gly Leu Ala Ser Ser Glu Glu
                1125                1130                1135
Ala Glu Gly Arg Met Arg Gly Pro Ser Val Gly Ala Ser Gly Arg Thr
```

```
          1140                1145                1150
Ser Lys Arg Gln Ser Asn Glu Thr Tyr Arg Asp Ala Val Arg Arg Val
       1155                1160                1165
Met Phe Ala Arg Tyr Lys Glu Leu Asp
    1170                1175
```

<210> 711
<211> 4060
<212> DNA
<213> Homo Sapiens

<400> 711

```
ctgaaggcag cggcgcggcg cctttgtggt agcagtggcc ccgcgcggag gaagttccgg      60
tgtccgcggc gctaggtcgg tggcggaggc tgaggagaag gaggagcggg ccgtggaggc     120
ttcgccgcct aggtactgct ataaccagaa tttggtataa aaaggattta cttgttgggg     180
ccctcttgat aaaaagagat gtgggggggat tctcgacctg ctaacagaac tggacctttt     240
cggactgggt gaaagctttt tctgcagcag tcatgttaaa aaccttgtgt tgactttcct     300
cgtgttctga aactaacaga actggacctt ttcggactgg gtgaaagctt tttctgcagc     360
agtcatgttg aaaaccttgt gttgactttc ttcgtgttct gaaatgggag cataaaagtt     420
tactccgcca nttcgtctta aaatagcaaa actttgctgt tttctgcaga tctaggacct     480
tgttacagaa ctctgccaaa aaaaaaatgt ttacagaaga atgtgctgtg attagagaag     540
aatatgctgg tgtgtagatt tcaaactctc tggacaatat gaataacact gtctttgttt     600
ctacagtggg agccaagaag aaaggtttgc tcccgggtgg aacagggatt atcctcctcc     660
tcccttaag agtcatgctc aagagagaca ctctggcaac tttcctggca gagattcact     720
tccctttgat ttccaggggc attcggggcc tccttttgca aatgtagagg agcattcttt     780
cagctatgga gctagagacg gaccgcatgg tgactatcga ggaggggagg gacctggaca     840
tgatttcagg gggggagatt tttcgtcttc tgatttccag agcagagatt catcacagtt     900
ggacttcagg ggtagggaca tacattctgg ggattttcgg gatagagaag gaccacctat     960
ggactatagg ggtggagatg gtacttctat ggattataga ggtagggagg cacctcatat    1020
gaactacaga gacagggatg ctcacgctgt tgacttcaga ggtagggatg ctcctccatc    1080
tgacttcagg ggccggggca cttatgattt agattttaga ggccgggatg gatcccatgc    1140
agattttagg ggaagggatt tatcagattt ggattttagg gccagagaac agtcccgttc    1200
tgattttagg aatagagatg tatctgattt ggactttaga gacaaagacg gaacacaagt    1260
agactttaga ggccgaggtt caggtactac tgatctagac tttagggaca gggatacgcc    1320
acattcagat ttcagaggta gacaccgatc taggactgat caggatttta ggggcagaga    1380
gatgggatct tgtatggaat ttaaagatag ggagatgccc cctgtggatc caaatatttt    1440
ggattacatt cagccctcta cacaagatag agaacattct ggtatgaatg tgaacaggag    1500
agaagaatcc acacacgacc atacgataga aaggcctgct tttggcattc agaagggaga    1560
atttgagcat tcagaaacaa gagaaggaga aacacaaggt gtagcctttg aacatgagtc    1620
tccagcagac tttcagaaca gccaaagtcc agttcaagac caagataagt cacagctttc    1680
tggacgtgaa gagcagagtt cagatgctgg tctgtttaaa gaagaaggcg gtctggactt    1740
tcttgggcgg caagacaccg attacagaag catggagtac cgtgatgtgg atcataggct    1800
gccaggaagc cagatgtttg gctatggcca gagcaagtct tttccagagg gcaaaactgc    1860
ccgagatgcc caacgggacc ttcaggatca agattatagg accggcccaa gtgaggagaa    1920
acccagcagg cttattcgat taagtggggt acctgaagat gccacaaaag aagagattct    1980
taatgctttt cggactcctg atggcatgcc tgtaaagaac ttgcagttga aggagtataa    2040
cacaggttac gactatggct atgtctgcgt ggagttttca ctcttggaag atgccatcgg    2100
atgcatggag gccaaccagg gaactctaat gatccaggac aaagaagtta ccctggagta    2160
tgtatcaagc ctggattttt ggtactgcaa acgatgtaag gcaaacattg gtgggcaccg    2220
atcttcctgt tcattctgca agaacccaag agaagtgaca gaggccaagc aagaattaat    2280
aacctaccct cagcctcaga aaacatccat accagcacca ttggaaaaac agcccaacca    2340
gcccctaaga ccagctgata aggaacctga acccaggaag agggaagaag gccaagagtc    2400
acgcttagga catcaaaaga gagaagcaga aaggtatctg cctccttctc gaagggaagg    2460
gccaactttc cgaagagacc gagagaggga gtcatggtct ggagagacac gccaggatgg    2520
agagagcaaa actatcatgc taaagcgtat ctatcgttcc acaccacctg aggtgatagt    2580
```

ggaagtgctg gagccctatg tccgccttac tactgccaac gtccgtatca tcaagaacag 2640
aacaggccct atggggcata cctatggctt tattgacctc gactcccatg tggaagctct 2700
tcgtgtggtg aagatcttac agaaccttga tccgccattt agcattgatg ggaagatggt 2760
agctgtaaac ctggccactg gaaaacgaag aaatgattct ggggaccatt ctgaccacat 2820
gcattactat cagggtaaaa aatatttccg agataggagg ggaggtggca gaaattcaga 2880
ctggtcttca gatacaaatc gacaaggaca acagtcatca tctgactgct acatatatga 2940
ttctgctagt ggctactatt atgacccctt ggcaggaact tattatgacc ccaataccca 3000
gcaagaagtc tatgtgcccc aggatcctgg attacctgag gaagaagaga tcaaggaaaa 3060
aaaacccacc agtcaaggaa agtcaagtag caagaaggaa atgtctaaaa gagatggcaa 3120
ggagaaaaaa gacagaggag tgacgaggtt tcaggaaaat gccagtgaag ggaaggcccc 3180
tgcagaagac gtctttaaga agcccctgcc tcctactgtg aagaaggaag agagtccccc 3240
tccacctaaa gtggtaaacc cactgatcgg cctcttgggt gaatatggag gagacagtga 3300
ctatgaggag gaagaagagg aggaacagac ccctccccca cagccccgca cagcacagcc 3360
ccagaagcga gaggagcaaa ccaagaagga gaatgaagaa gacaaactca ctgactggaa 3420
taaactggct tgtctgcttt gcagaaggca gtttcccaat aaagaagttc tgatcaaaca 3480
ccagcagctg tcagacctgc acaagcaaaa cctggaaatc caccggaaga taaaacagtc 3540
tgagcaggag ctagcctatc tggaaaggag agaacgagag ggaaagttta aaggaagagg 3600
aaatgatcgc agggaaaagc tccagtcttt tgactctcca gaaaggaaac ggattaagta 3660
ctccagggaa actgacagtg atcgtaaact tgttgataaa gaagatatcg acactagcag 3720
caaaggaggc tgtgtccaac aggctactgg ctggaggaaa gggacaggcc tgggatatgg 3780
ccatcctgga ttggcttcat cagaggaggc tgaaggccgg atgaggggcc ccagtgttgg 3840
agcctcagga agaaccagca aaagacagtc caacgagact tatcgagatg ctgttcgaag 3900
agtcatgttt gctcgatata aagaactcga ttaagaaagg agacaagttc catgggatac 3960
aacctccctc ttgttttgtt tgtctctcct tttcttttgt tactgttctt gctgctagaa 4020
ctttttaaa taaacttttt ttcaatgtga ttaaaaaaaa 4060

<210> 712
<211> 3736
<212> DNA
<213> Homo Sapiens

<400> 712
aaggaggagc gggccgtgga ggcttcgccg cctaggtact gctataacca gaatttggta 60
gaaaaaggat ttacttgttg gggccctctt gataaaaaga gatgtggggg gattctcgac 120
ctgctaacag aactggacct tttcgatcta ggaccttgtt acagaactct gccaaaaaaa 180
aaatgtttac agaagaatgt gctgtgatta gagaagaata tgctggtgtg tagatttcaa 240
actctntgga caatatgaat aacactgtct ttgtttctac agtgggagcc aagaagaaag 300
gtttgctccc gggtggaaca gggattatcc tcctcctccc cttaagagtc atgctcaaga 360
gagacactct ggcaactttc ctggcagaga ttcacttccc tttgatttcc aggggcattc 420
ggggcctcct tttgcaaatg tagaggagca ttctttcagc tatggagcta gagacggacc 480
gcatggtgac tatcgaggag gggagggacc tggacatgat ttcaggggg gagatttttc 540
gtcttctgat ttccagagca gagattcatc acagttggac ttcaggggta gggacataca 600
ttctggggat tttcgggata gagaaggacc acctatggac tatagggtg gagatggtac 660
ttctatggat tatagaggta gggaggcacc tcatatgaac tacagagaca gggatgctca 720
cgctgttgac ttcagaggta gggatgctcc tccatctgac ttcaggggcc ggggcactta 780
tgatttagat tttagaggcc gggatggatc ccatgcagat tttaggggaa gggatttatc 840
agatttggat tttagggcca gagaacagtc ccgttctgat tttaggaata gagatgtatc 900
tgatttggac tttagagaca aagacggaac acaagtagac tttagaggcc gaggttcagg 960
tactactgat ctagacttta gggacaggga tacgccacat tcagatttca gaggtagaca 1020
ccgatctagg actgatcagg attttagggg cagagagatg ggatcttgta tggaatttaa 1080
agatagggag atgccccctg tggatccaaa tattttggat tacattcagc cctctacaca 1140
agatagagaa cattctggta tgaatgtgaa caggagagaa gaatccacac acgaccatac 1200
gatagaaagg cctgcttttg gcattcagaa gggagaattt gagcattcag aaacaagaga 1260
aggagaaaca caaggtgtag cctttgaaca tgagtctcca gcagactttc agaacagcca 1320
aagtccagtt caagaccaag ataagtcaca gctttctgga cgtgaagagc agagttcaga 1380

```
tgctggtctg tttaaagaag aaggcggtct ggactttctt gggcggcaag acaccgatta    1440
cagaagcatg gagtaccgtg atgtggatca taggctgcca ggaagccaga tgtttggcta    1500
tggccagagc aagtcttttc cagagggcaa aactgcccga gatgcccaac gggaccttca    1560
ggatcaagat tataggaccg gcccaagtga ggagaaaccc agcaggctta ttcgattaag    1620
tggggtacct gaagatgcca caaaagaaga gattcttaat gcttttcgga ctcctgatgg    1680
catgcctgta aagaacttgc agttgaagga gtataacaca ggttacgact atggctatgt    1740
ctgcgtggag ttttcactct tggaagatgc catcggatgc atggaggcca accagggaac    1800
tctaatgatc caggacaaag aagttaccct ggagtatgta tcaagcctgg atttttggta    1860
ctgcaaacga tgtaaggcaa acattggtgg gcaccgatct tcctgttcat tctgcaagaa    1920
cccaagagaa gtgacagagg ccaagcaaga attaataacc taccctcagc ctcagaaaac    1980
atccatacca gcaccattgg aaaaacagcc caaccagccc ctaagaccag ctgataagga    2040
acctgaaccc aggaagaggg aagaaggcca agagtcacgc ttaggacatc aaaagagaga    2100
agcagaaagg tatctgcctc cttctcgaag ggaagggcca actttccgaa gagaccgaga    2160
gagggagtca tggtctggag agacacgcca ggatggagag agcaaaacta tcatgctaaa    2220
gcgtatctat cgttccacac cacctgaggt gatagtggaa gtgctggagc cctatgtccg    2280
ccttactact gccaacgtcc gtatcatcaa gaacagaaca ggccctatgg ggcataccta    2340
tggctttatt gacctcgact cccatgtgga agctcttcgt gtggtgaaga tcttacagaa    2400
ccttgatccg ccatttagca ttgatgggaa gatggtagct gtaaacctgg ccactggaaa    2460
acgaagaaat gattctgggg accattctga ccacatgcat tactatcagg gtaaaaaata    2520
tttccgagat aggaggggag gtggcagaaa ttcagactgg tcttcagata caaatcgaca    2580
aggacaacag tcatcatctg actgctacat atatgattct gctagtggct actattatga    2640
ccccttggca ggaacttatt atgaccccaa tacccagcaa gaagtctatg tgccccagga    2700
tcctggatta cctgaggaag aagagatcaa ggaaaaaaaa cccaccagtc aaggaaagtc    2760
aagtagcaag aaggaaatgt ctaaaagaga tggcaaggag aaaaaagaca gaggagtgac    2820
gaggtttcag gaaaatgcca gtgaagggaa ggcccctgca gaagacgtct ttaagaagcc    2880
cctgcctcct actgtgaaga aggaagagag tccccctcca cctaaagtgg taaacccact    2940
gatcggcctc ttgggtgaat atggaggaga cagtgactat gaggaggaag aagaggagga    3000
acagacccct cccccacagc cccgcacagc acagccccag aagcgagagg agcaaaccaa    3060
gaaggagaat gaagaagaca aactcactga ctggaataaa ctggcttgtc tgctttgcag    3120
aaggcagttt cccaataaag aagttctgat caaacaccag cagctgtcag acctgcacaa    3180
gcaaaacctg gaaatccacc ggaagataaa acagtctgag caggagctag cctatctgga    3240
aaggagagaa cgagagggaa agtttaaagg aagaggaaat gatcgcaggg aaaagctcca    3300
gtcttttgac tctccagaaa ggaaacggat taagtactcc agggaaactg acagtgatcg    3360
taaacttgtt gataaagaag atatcgacac tagcagcaaa ggaggctgtg tccaacaggc    3420
tactggctgg aggaaaggga caggcctggg atatggccat cctggattgg cttcatcaga    3480
ggaggctgaa ggccggatga ggggccccag tgttggagcc tcaggaagaa ccagcaaaag    3540
acagtccaac gagacttatc gagatgctgt tcgaagagtc atgtttgctc gatataaaga    3600
actcgattaa gaaaggagac aagttccatg ggatacaacc tccctcttgt tttgtttgtc    3660
tctccttttc ttttgttact gttcttgctg ctagaacttt tttaaataaa ctttttttca    3720
atgtgattaa aaaaaa                                                    3736
```

<210> 713
<211> 10
<212> PRT
<213> Homo Sapiens

<400> 713
Asn Val Glu Glu Xaa His Ser Phe Ser Tyr
1 5 10

<210> 714
<211> 10
<212> PRT
<213> Homo Sapiens

<400> 714
Pro Val Asp Pro Xaa Asn Ile Leu Asp Tyr
1 5 10

<210> 715
<211> 10
<212> PRT
<213> Homo Sapiens

<400> 715
Asp Thr Asp Tyr Xaa Arg Ser Met Glu Tyr
1 5 10

<210> 716
<211> 10
<212> PRT
<213> Homo Sapiens

<400> 716
Ser Leu Leu Glu Xaa Asp Ala Ile Gly Cys
1 5 10

<210> 717
<211> 10
<212> PRT
<213> Homo Sapiens

<400> 717
Thr Leu Met Ile Xaa Gln Asp Lys Glu Val
1 5 10

<210> 718
<211> 10
<212> PRT
<213> Homo Sapiens

<400> 718
Tyr Val Ser Ser Leu Asp Phe Trp Tyr Cys
1 5 10

<210> 719
<211> 10
<212> PRT
<213> Homo Sapiens

<400> 719
Val Ile Val Glu Val Leu Glu Pro Tyr Val
1 5 10

<210> 720
<211> 10
<212> PRT
<213> Homo Sapiens

<400> 720

Lys Leu Thr Asp Xaa Trp Asn Lys Leu Ala
1 5 10

<210> 721
<211> 10
<212> PRT
<213> Homo Sapiens

<400> 721
Gln Leu Ser Asp Leu His Lys Gln Asn Leu
1 5 10

<210> 722
<211> 10
<212> PRT
<213> Homo Sapiens

<400> 722
Lys Gln Ser Glu Gln Glu Leu Ala Tyr Leu
1 5 10

<210> 723
<211> 10
<212> PRT
<213> Homo Sapiens

<400> 723
Lys Leu Val Asp Lys Glu Asp Ile Asp Thr
1 5 10

<210> 724
<211> 10
<212> PRT
<213> Homo Sapiens

<400> 724
Val Met Phe Ala Xaa Arg Tyr Lys Glu Leu
1 5 10

<210> 725
<211> 10
<212> PRT
<213> Homo Sapiens

<400> 725
Gln Met Phe Gly Xaa Tyr Gly Gln Ser Lys
1 5 10

<210> 726
<211> 10
<212> PRT
<213> Homo Sapiens

<400> 726
Gly Met Pro Val Lys Asn Leu Gln Leu Lys

1 5 10

<210> 727
<211> 10
<212> PRT
<213> Homo Sapiens

<400> 727
Gly Leu Pro Glu Xaa Glu Glu Glu Ile Lys
1 5 10

<210> 728
<211> 10
<212> PRT
<213> Homo Sapiens

<400> 728
Leu Leu Cys Arg Arg Gln Phe Pro Asn Lys
1 5 10

<210> 729
<211> 10
<212> PRT
<213> Homo Sapiens

<400> 729
Glu Tyr Arg Asp Xaa Val Asp His Arg Leu
1 5 10

<210> 730
<211> 10
<212> PRT
<213> Homo Sapiens

<400> 730
Gly Tyr Val Cys Xaa Val Glu Phe Ser Leu
1 5 10

<210> 731
<211> 10
<212> PRT
<213> Homo Sapiens

<400> 731
Asp Tyr Gly Tyr Xaa Val Cys Val Glu Phe
1 5 10

<210> 732
<211> 10
<212> PRT
<213> Homo Sapiens

<400> 732
Trp Tyr Cys Lys Arg Cys Lys Ala Asn Ile
1 5 10

<210> 733
<211> 10
<212> PRT
<213> Homo Sapiens

<400> 733
Thr Tyr Pro Gln Pro Gln Lys Thr Ser Ile
1 5 10

<210> 734
<211> 10
<212> PRT
<213> Homo Sapiens

<400> 734
Ile Tyr Arg Ser Thr Pro Pro Glu Val Ile
1 5 10

<210> 735
<211> 10
<212> PRT
<213> Homo Sapiens

<400> 735
His Tyr Tyr Gln Xaa Gly Lys Lys Tyr Phe
1 5 10

<210> 736
<211> 10
<212> PRT
<213> Homo Sapiens

<400> 736
Val Tyr Val Pro Xaa Gln Asp Pro Gly Leu
1 5 10

<210> 737
<211> 10
<212> PRT
<213> Homo Sapiens

<400> 737
Trp Asn Arg Asp Tyr Pro Pro Pro Pro Leu
1 5 10

<210> 738
<211> 10
<212> PRT
<213> Homo Sapiens

<400> 738
Met Pro Pro Val Xaa Asp Pro Asn Ile Leu
1 5 10

<210> 739

<211> 10
<212> PRT
<213> Homo Sapiens

<400> 739
Thr Ala Arg Asp Xaa Ala Gln Arg Asp Leu
1 5 10

<210> 740
<211> 10
<212> PRT
<213> Homo Sapiens

<400> 740
Gly Pro Ser Glu Glu Lys Pro Ser Arg Leu
1 5 10

<210> 741
<211> 10
<212> PRT
<213> Homo Sapiens

<400> 741
Thr Pro Pro Glu Val Ile Val Glu Val Leu
1 5 10

<210> 742
<211> 10
<212> PRT
<213> Homo Sapiens

<400> 742
Arg Val Met Phe Ala Arg Tyr Lys Glu Leu
1 5 10

<210> 743
<211> 10
<212> PRT
<213> Homo Sapiens

<400> 743
Arg Glu Met Gly Xaa Ser Cys Met Glu Phe
1 5 10

<210> 744
<211> 10
<212> PRT
<213> Homo Sapiens

<400> 744
Glu Glu Gln Ser Ser Asp Ala Gly Leu Phe
1 5 10

<210> 745
<211> 10

<212> PRT
<213> Homo Sapiens

<400> 745
Lys Glu Tyr Asn Xaa Thr Gly Tyr Asp Tyr
1 5 10

<210> 746
<211> 10
<212> PRT
<213> Homo Sapiens

<400> 746
Thr Glu Ala Lys Gln Glu Leu Ile Thr Tyr
1 5 10

<210> 747
<211> 10
<212> PRT
<213> Homo Sapiens

<400> 747
Val Glu Ala Leu Arg Val Val Lys Ile Leu
1 5 10

<210> 748
<211> 10
<212> PRT
<213> Homo Sapiens

<400> 748
Gly Glu Tyr Gly Xaa Gly Asp Ser Asp Tyr
1 5 10

<210> 749
<211> 10
<212> PRT
<213> Homo Sapiens

<400> 749
Leu Glu Arg Arg Glu Arg Glu Gly Lys Phe
1 5 10

<210> 750
<211> 10
<212> PRT
<213> Homo Sapiens

<400> 750
Arg Gln Asp Gly Glu Ser Lys Thr Ile Met
1 5 10

<210> 751
<211> 10
<212> PRT

<213> Homo Sapiens

<400> 751
Thr Pro Pro Glu Val Ile Val Glu Val Leu
1 5 10

<210> 752
<211> 10
<212> PRT
<213> Homo Sapiens

<400> 752
Tyr Gly Phe Ile Asp Leu Asp Ser His Val
1 5 10

<210> 753
<211> 10
<212> PRT
<213> Homo Sapiens

<400> 753
Arg Gln Phe Pro Xaa Asn Lys Glu Val Leu
1 5 10

<210> 754
<211> 10
<212> PRT
<213> Homo Sapiens

<400> 754
Asn Val Glu Glu Xaa His Ser Phe Ser Tyr
1 5 10

<210> 755
<211> 10
<212> PRT
<213> Homo Sapiens

<400> 755
Pro Val Asp Pro Xaa Asn Ile Leu Asp Tyr
1 5 10

<210> 756
<211> 10
<212> PRT
<213> Homo Sapiens

<400> 756
Asp Thr Asp Tyr Xaa Arg Ser Met Glu Tyr
1 5 10

<210> 757
<211> 10
<212> PRT
<213> Homo Sapiens

<400> 757
Trp Gln Ser Ala Xaa Arg Phe Tyr Tyr Leu
1 5 10

<210> 758
<211> 10
<212> PRT
<213> Homo Sapiens

<400> 758
Ser Leu Leu Glu Xaa Asp Ala Ile Gly Cys
1 5 10

<210> 759
<211> 10
<212> PRT
<213> Homo Sapiens

<400> 759
Thr Leu Met Ile Xaa Gln Asp Lys Glu Val
1 5 10

<210> 760
<211> 10
<212> PRT
<213> Homo Sapiens

<400> 760
Tyr Val Ser Ser Leu Asp Phe Trp Tyr Cys
1 5 10

<210> 761
<211> 10
<212> PRT
<213> Homo Sapiens

<400> 761
Val Ile Val Glu Val Leu Glu Pro Tyr Val
1 5 10

<210> 762
<211> 10
<212> PRT
<213> Homo Sapiens

<400> 762
Lys Leu Thr Asp Xaa Trp Asn Lys Leu Ala
1 5 10

<210> 763
<211> 10
<212> PRT
<213> Homo Sapiens

<400> 763

Gln Leu Ser Asp Leu His Lys Gln Asn Leu
1 5 10

<210> 764
<211> 10
<212> PRT
<213> Homo Sapiens

<400> 764
Lys Gln Ser Glu Gln Glu Leu Ala Tyr Leu
1 5 10

<210> 765
<211> 10
<212> PRT
<213> Homo Sapiens

<400> 765
Lys Leu Val Asp Lys Glu Asp Ile Asp Thr
1 5 10

<210> 766
<211> 10
<212> PRT
<213> Homo Sapiens

<400> 766
Val Met Phe Ala Xaa Arg Tyr Lys Glu Leu
1 5 10

<210> 767
<211> 10
<212> PRT
<213> Homo Sapiens

<400> 767
Gln Met Phe Gly Xaa Tyr Gly Gln Ser Lys
1 5 10

<210> 768
<211> 10
<212> PRT
<213> Homo Sapiens

<400> 768
Gly Met Pro Val Lys Asn Leu Gln Leu Lys
1 5 10

<210> 769
<211> 10
<212> PRT
<213> Homo Sapiens

<400> 769
Gly Leu Pro Glu Xaa Glu Glu Glu Ile Lys

1 5 10

<210> 770
<211> 10
<212> PRT
<213> Homo Sapiens

<400> 770
Leu Leu Cys Arg Arg Gln Phe Pro Asn Lys
1 5 10

<210> 771
<211> 10
<212> PRT
<213> Homo Sapiens

<400> 771
Tyr Tyr Leu Asn Xaa Ala Thr Asp Val Leu
1 5 10

<210> 772
<211> 10
<212> PRT
<213> Homo Sapiens

<400> 772
Phe Tyr Tyr Leu Asn Ala Thr Asp Val Leu
1 5 10

<210> 773
<211> 10
<212> PRT
<213> Homo Sapiens

<400> 773
Glu Tyr Arg Asp Xaa Val Asp His Arg Leu
1 5 10

<210> 774
<211> 10
<212> PRT
<213> Homo Sapiens

<400> 774
Gly Tyr Val Cys Xaa Val Glu Phe Ser Leu
1 5 10

<210> 775
<211> 10
<212> PRT
<213> Homo Sapiens

<400> 775
Asp Tyr Gly Tyr Xaa Val Cys Val Glu Phe
1 5 10

<210> 776
<211> 10
<212> PRT
<213> Homo Sapiens

<400> 776
Trp Tyr Cys Lys Arg Cys Lys Ala Asn Ile
1 5 10

<210> 777
<211> 10
<212> PRT
<213> Homo Sapiens

<400> 777
Thr Tyr Pro Gln Pro Gln Lys Thr Ser Ile
1 5 10

<210> 778
<211> 10
<212> PRT
<213> Homo Sapiens

<400> 778
Ile Tyr Arg Ser Thr Pro Pro Glu Val Ile
1 5 10

<210> 779
<211> 10
<212> PRT
<213> Homo Sapiens

<400> 779
His Tyr Tyr Gln Xaa Gly Lys Lys Tyr Phe
1 5 10

<210> 780
<211> 10
<212> PRT
<213> Homo Sapiens

<400> 780
Val Tyr Val Pro Xaa Gln Asp Pro Gly Leu
1 5 10

<210> 781
<211> 10
<212> PRT
<213> Homo Sapiens

<400> 781
Trp Asn Arg Asp Tyr Pro Pro Pro Pro Leu
1 5 10

<210> 782

<211> 10
<212> PRT
<213> Homo Sapiens

<400> 782
Met Pro Pro Val Xaa Asp Pro Asn Ile Leu
1 5 10

<210> 783
<211> 10
<212> PRT
<213> Homo Sapiens

<400> 783
Thr Ala Arg Asp Xaa Ala Gln Arg Asp Leu
1 5 10

<210> 784
<211> 10
<212> PRT
<213> Homo Sapiens

<400> 784
Gly Pro Ser Glu Glu Lys Pro Ser Arg Leu
1 5 10

<210> 785
<211> 10
<212> PRT
<213> Homo Sapiens

<400> 785
Thr Pro Pro Glu Val Ile Val Glu Val Leu
1 5 10

<210> 786
<211> 10
<212> PRT
<213> Homo Sapiens

<400> 786
Arg Val Met Phe Ala Arg Tyr Lys Glu Leu
1 5 10

<210> 787
<211> 10
<212> PRT
<213> Homo Sapiens

<400> 787
Ser Glu Ala Trp Ser Ser Asn Glu Lys Phe
1 5 10

<210> 788
<211> 10

<212> PRT
<213> Homo Sapiens

<400> 788
Arg Glu Met Gly Xaa Ser Cys Met Glu Phe
1 5 10

<210> 789
<211> 10
<212> PRT
<213> Homo Sapiens

<400> 789
Glu Glu Gln Ser Ser Asp Ala Gly Leu Phe
1 5 10

<210> 790
<211> 10
<212> PRT
<213> Homo Sapiens

<400> 790
Lys Glu Tyr Asn Xaa Thr Gly Tyr Asp Tyr
1 5 10

<210> 791
<211> 10
<212> PRT
<213> Homo Sapiens

<400> 791
Thr Glu Ala Lys Gln Glu Leu Ile Thr Tyr
1 5 10

<210> 792
<211> 10
<212> PRT
<213> Homo Sapiens

<400> 792
Val Glu Ala Leu Arg Val Val Lys Ile Leu
1 5 10

<210> 793
<211> 10
<212> PRT
<213> Homo Sapiens

<400> 793
Gly Glu Tyr Gly Xaa Gly Asp Ser Asp Tyr
1 5 10

<210> 794
<211> 10
<212> PRT

<213> Homo Sapiens

<400> 794
Leu Glu Arg Arg Glu Arg Glu Gly Lys Phe
1 5 10

<210> 795
<211> 10
<212> PRT
<213> Homo Sapiens

<400> 795
Arg Gln Asp Gly Glu Ser Lys Thr Ile Met
1 5 10

<210> 796
<211> 10
<212> PRT
<213> Homo Sapiens

<400> 796
Thr Pro Pro Glu Val Ile Val Glu Val Leu
1 5 10

<210> 797
<211> 10
<212> PRT
<213> Homo Sapiens

<400> 797
Tyr Gly Phe Ile Asp Leu Asp Ser His Val
1 5 10

<210> 798
<211> 10
<212> PRT
<213> Homo Sapiens

<400> 798
Arg Gln Phe Pro Xaa Asn Lys Glu Val Leu
1 5 10

<210> 799
<211> 1464
<212> DNA
<213> Homo Sapiens

<400> 799
agtaccgggt acgcaggggt gcctcaacca cactccgtcc acggactctc cgttatttta 60
ggaggtccct ggccaaagat ttatttctct tgacaaccaa gggcctccgt ctggatttcc 120
aaggaagaat ttcctctgaa gcaccggaac ttgctactac cagcaccatg ccctaccaat 180
atccagcact gaccccggag cagaagaagg agctgtctga catcgctcac cgcatcgtgg 240
cacctggcaa gggcatcctg gctgcagatg agtccactgg gagcattgcc aagcggctgc 300
agtccattgg caccgagaac accgaggaga accggcgctt ctaccgccag ctgctgctga 360
cagctgacga ccgcgtgaac ccctgcattg ggggtgtcat cctcttccat gagacactct 420

```
accagaaggc ggatgatggg cgtcccttcc cccaagttat caaatccaag ggcggtgttg     480
tgggcatcaa ggtagacaag ggcgtggtcc ccctggcagg gacaaatggc gagactacca     540
cccaagggtt ggatgggctg tctgagcgct gtgcccagta caagaaggac ggagctgact     600
tcgccaagtg gcgttgtgtg ctgaagattg gggaacacac cccctcagcc ctcgccatca     660
tggaaaatgc caatgttctg gcccgttatg ccagtatctg ccagcagaat ggcattgtgc     720
ccatcgtgga gcctgagatc ctccctgatg gggaccatga cttgaagcgc tgccagtatg     780
tgaccgagaa ggtgctggct gctgtctaca aggctctgag tgaccaccac atctacctgg     840
aaggcacctt gctgaagccc aacatggtca ccccaggcca tgcttgcact cagaagtttt     900
ctcatgagga gattgccatg gcgaccgtca cagcgctgcg ccgcacagtg ccccccgctg     960
tcactgggat caccttcctg tctggaggcc agagtgagga ggaggcgtcc atcaacctca    1020
atgccattaa caagtgcccc ctgctgaagc cctgggccct gaccttctcc tacggccgag    1080
ccctgcaggc ctctgccctg aaggcctggg gcgggaagaa ggagaacctg aaggctgcgc    1140
aggaggagta tgtcaagcga gccctggcca acagccttgc ctgtcaagga aagtacactc    1200
cgagcggtca ggctggggct gctgccagcg agtccctctt cgtctctaac cacgcctatt    1260
aagcggaggt gttcccaggc tgcccccaac aactccaggc cctgcccccc cccactcttg    1320
aagaggaggc cgcctcctcg gggctccagg ctggcttgcc cgcgctcttt cttccctcgt    1380
gacagtggtg tgtggtgtcg tctgtgaatg ctaagtccat cacccctttcc ggcacactgc    1440
caaataaaca gctatttaag gggg                                           1464
```

<210> 800
<211> 364
<212> PRT
<213> Homo Sapiens

<400> 800

```
Met Pro Tyr Gln Tyr Pro Ala Leu Thr Pro Glu Gln Lys Lys Glu Leu
 1               5                  10                  15
Ser Asp Ile Ala His Arg Ile Val Ala Pro Gly Lys Gly Ile Leu Ala
            20                  25                  30
Ala Asp Glu Ser Thr Gly Ser Ile Ala Lys Arg Leu Gln Ser Ile Gly
        35                  40                  45
Thr Glu Asn Thr Glu Glu Asn Arg Arg Phe Tyr Arg Gln Leu Leu Leu
    50                  55                  60
Thr Ala Asp Asp Arg Val Asn Pro Cys Ile Gly Gly Val Ile Leu Phe
65                  70                  75                  80
His Glu Thr Leu Tyr Gln Lys Ala Asp Asp Gly Arg Pro Phe Pro Gln
                85                  90                  95
Val Ile Lys Ser Lys Gly Gly Val Val Gly Ile Lys Val Asp Lys Gly
            100                 105                 110
Val Val Pro Leu Ala Gly Thr Asn Gly Glu Thr Thr Thr Gln Gly Leu
        115                 120                 125
Asp Gly Leu Ser Glu Arg Cys Ala Gln Tyr Lys Lys Asp Gly Ala Asp
    130                 135                 140
Phe Ala Lys Trp Arg Cys Val Leu Lys Ile Gly Glu His Thr Pro Ser
145                 150                 155                 160
Ala Leu Ala Ile Met Glu Asn Ala Asn Val Leu Ala Arg Tyr Ala Ser
                165                 170                 175
Ile Cys Gln Gln Asn Gly Ile Val Pro Ile Val Glu Pro Glu Ile Leu
            180                 185                 190
Pro Asp Gly Asp His Asp Leu Lys Arg Cys Gln Tyr Val Thr Glu Lys
        195                 200                 205
Val Leu Ala Ala Val Tyr Lys Ala Leu Ser Asp His His Ile Tyr Leu
    210                 215                 220
Glu Gly Thr Leu Leu Lys Pro Asn Met Val Thr Pro Gly His Ala Cys
225                 230                 235                 240
```

```
Thr Gln Lys Phe Ser His Glu Glu Ile Ala Met Ala Thr Val Thr Ala
                245                 250                 255
Leu Arg Arg Thr Val Pro Pro Ala Val Thr Gly Ile Thr Phe Leu Ser
            260                 265                 270
Gly Gly Gln Ser Glu Glu Glu Ala Ser Ile Asn Leu Asn Ala Ile Asn
        275                 280                 285
Lys Cys Pro Leu Leu Lys Pro Trp Ala Leu Thr Phe Ser Tyr Gly Arg
    290                 295                 300
Ala Leu Gln Ala Ser Ala Leu Lys Ala Trp Gly Gly Lys Lys Glu Asn
305                 310                 315                 320
Leu Lys Ala Ala Gln Glu Glu Tyr Val Lys Arg Ala Leu Ala Asn Ser
                325                 330                 335
Leu Ala Cys Gln Gly Lys Tyr Thr Pro Ser Gly Gln Ala Gly Ala Ala
            340                 345                 350
Ala Ser Glu Ser Leu Phe Val Ser Asn His Ala Tyr
        355                 360
```

<210> 801
<211> 3504
<212> DNA
<213> Homo Sapiens

<400> 801

```
ctctgctttt ctctttcaga gctgttgcgc agccattggt acctgtattg gggaaacata      60
gcatacaagc aagaagctta cagcctcagt ggcgaaaaat ttttcatgtc agagaccgag     120
aactcttgca gtcgtttatg tcatcccttc ttctccagac agaagatacc aaaaagttgc     180
aatcaaagat ctgttcatct tattgataaa gtcactaata agccaaaatg tctgtcaacg     240
tcaaccgcag cgtgtcagac cagttctatc gctacaagat gccccgtttg attgctaagg     300
ttgagggcaa aggaaatgga atcaagacag ttatagtcaa catggttgac gttgcaaagg     360
cgcttaatcg gcctccaacg tatcccacca aatattttgg ttgtgagctg ggagcacaga     420
cccagtttga tgttaagaat gaccgttaca ttgtcaatgg atctcatgag gcgaataagc     480
tgcaagacat gttggatgga ttcattaaaa aatttgttct ctgtcctgag tgtgagaatc     540
ctgaaacaga tctgcatgtc aatccaaaga agcaaacaat aggtaattct tgtaaagcct     600
gtgggtaccg aggcatgctt gacacacatc ataaactctg tacattcatt ctcaaaaacc     660
cacctgagaa tagtgacatt ggtacaggaa agaaagagaa agaaaagaaa aatagaaagg     720
gcaaggacaa ggaaaatggc tctgtatcca ccagtgagac accaccacct ccaccaccaa     780
atgaaattag tcctccacat gctgtggaag aagaggaaga tgatgattgg ggggaggata     840
caactgagga agctcaaagg cgcagaatgg atgaaatcag tgaccatgca aaaggtctga     900
cacttagcga tgatttggaa agaactgtag aagagcgtgt taacatcctg tttgattttg     960
ttaagaaaaa gaaagaagag ggcattattg attcatctga taaagacatt gtggctgagg    1020
cagaaagact ggatgtaaaa gccatgggcc ctctcgtttt gacagaagtt ctctttgatg    1080
agaagataag agagcaaatc aagaaataca ggcgccattt tttaagattt tgtcataaca    1140
acaaaaaggc ccagcggtac cttcttcatg gtttggaatg tgtggtagca atgcatcaag    1200
ctcagttgat ctccaagatt ccacatatct tgaaggagat gtatgatgca gacctttag     1260
aggaagaggt cattatcagc tggtcagaaa aggcctctaa gaaatatgtc tcaaaagaac    1320
ttgccaaaga gattcgtgtc aaagcagagc catttattaa atggttgaag gaagcggagg    1380
aggaatcttc tggtggtgag gaagaagacg aagatgaaaa tattgaggtg gtatattcga    1440
agactgccag tgtaccaaaa gttgaaactg tgaagtctga caacaaggat gacgacattg    1500
atattgatgc catttaaaag gatggatgca acttagctta acagtgtaat gctgcaaatt    1560
tttctccatt atcagccaga agtgcaacat gtatgtgcaa gagctaaagt ggcttaacat    1620
catgctacac ttgatactaa aaagctatta ctgtgagtgg tctataatta agcccaatga    1680
gacatctagg gagtccatac atatcagtga gcagttgtag tttgcttatt tatagcatgt    1740
ttctttcgga aaaactagtg gtggacacat ttggatcaca tttatacagt tataaaaaat    1800
aaagatttga ttttggtcat tcttcagact ttgggctatg aatggcttat gctgaagtaa    1860
ttggctactt ttaggatgtt acaccattta ataacttaga cttcttaagt ttggtagatt    1920
```

```
gttaggtact gaagacttga agaatgcaaa caattataat gaccttactc agccattaag    1980
aaatgaagta ttttgaaagt tgtgtctcca gtccattgag attggcaact gacaattctt    2040
gtcattctaa ggaaatttga tgatttaatg acagtgtgac atcctcatga gaagtaaaaa    2100
tgacctgtgt gtcctatggt ttaagagcaa attttgaaac ttggagttgt ggtttttcag    2160
tttgtgtaca ctcaccccaa attgtagtct attgagtcat gtgcattgca cgttggataa    2220
gccagggaaa tgacaaataa gtattttgtg tgtatttagt ggttgctttg tactgagaga    2280
aaagctttga ggtgtgatta aatcgtaaac tctgattcta tttgggagaa acaggaaaaa    2340
ggtgcactta atctaaaaca gcataagttt tcaacttta ccccttaaatt ataatttcaa    2400
gatgtttaga catactgtat cttgtgtttg atgtgttccc cctccctaat attatggttt    2460
attctttaat gccttttaat ttggatataa tagcttgtac tttagatttt ggttgctatc    2520
ttgccaaaat aagtgttact gtttttcaag cttgatcccc ttccctgatt gtcttattta    2580
aagagaaagt taaactcata cttctgagtc agagcctgta ttttggttaa gacttgggat    2640
atttttact tcacattgaa tatagctgga tacctgagaa gtctggtgat ggcactgggt    2700
gggtgcagct agctaaggcc tgaccagccc attcagagcc ttggacttca gacacaaaag    2760
tgagtttctt acccacttgc tggtgtaaac tctatctggg gtcctgacta tatttgaata    2820
cttgtcttca atattaaaaa acatagcaca tttttctttc tacaaaagta cattctggag    2880
ttaagaaccc atgtggttga tttgtgtgtg gcgtgctagc tcatacatta tttggatctt    2940
attctttgtg tcatccatct cacagattat aagactttga ttaatgtaaa aagtatgcgt    3000
taaaatcata ccaaacattt ggtaaaatta aaaccttgat gggaggctgg gcgtggaaca    3060
ggagccatat acctggaatg gtaacagggg aatgtgctat gtcacaccaa agaagtggga    3120
cttggaaagt cacttgtctc ctgggtttca gactctttgt tgcatgggca gcccatccat    3180
atgtcattac tttttgagat tctcaagtag atcagcacat ttcggcctca ggttggcaag    3240
attttgtctt agagctgttg ctttaaaggg aaatggtcag gtcttagaca cttaggaagg    3300
tcttgggctt ctgttcattc tggtgccaaa ccagtgggat tcaaatttca cacaatctgg    3360
gtttttattc atggaggtta acctggtaag agtaatcctt catggctcta ttgaggtgtc    3420
ttaaaaagtt tcctgtttca aacagctaca ttacttgatt aaaacaatgt tataaaatta    3480
aatttccccc tcctttcata ttaa                                          3504
```

<210> 802
<211> 429
<212> PRT
<213> Homo Sapiens

<400> 802

```
Met Ser Val Asn Val Asn Arg Ser Val Ser Asp Gln Phe Tyr Arg Tyr
 1               5                  10                  15
Lys Met Pro Arg Leu Ile Ala Lys Val Glu Gly Lys Gly Asn Gly Ile
            20                  25                  30
Lys Thr Val Ile Val Asn Met Val Asp Val Ala Lys Ala Leu Asn Arg
        35                  40                  45
Pro Pro Thr Tyr Pro Thr Lys Tyr Phe Gly Cys Glu Leu Gly Ala Gln
    50                  55                  60
Thr Gln Phe Asp Val Lys Asn Asp Arg Tyr Ile Val Asn Gly Ser His
65                  70                  75                  80
Glu Ala Asn Lys Leu Gln Asp Met Leu Asp Gly Phe Ile Lys Lys Phe
                85                  90                  95
Val Leu Cys Pro Glu Cys Glu Asn Pro Glu Thr Asp Leu His Val Asn
            100                 105                 110
Pro Lys Lys Gln Thr Ile Gly Asn Ser Cys Lys Ala Cys Gly Tyr Arg
        115                 120                 125
Gly Met Leu Asp Thr His His Lys Leu Cys Thr Phe Ile Leu Lys Asn
    130                 135                 140
Pro Pro Glu Asn Ser Asp Ile Gly Thr Gly Lys Lys Glu Lys Glu Lys
145                 150                 155                 160
Lys Asn Arg Lys Gly Lys Asp Lys Glu Asn Gly Ser Val Ser Thr Ser
```

```
                165                 170                 175
Glu Thr Pro Pro Pro Pro Pro Asn Glu Ile Ser Pro Pro His Ala
            180                 185                 190
Val Glu Glu Glu Glu Asp Asp Asp Trp Gly Glu Asp Thr Thr Glu Glu
        195                 200                 205
Ala Gln Arg Arg Arg Met Asp Glu Ile Ser Asp His Ala Lys Gly Leu
    210                 215                 220
Thr Leu Ser Asp Asp Leu Glu Arg Thr Val Glu Glu Arg Val Asn Ile
225                 230                 235                 240
Leu Phe Asp Phe Val Lys Lys Lys Lys Glu Glu Gly Ile Ile Asp Ser
                245                 250                 255
Ser Asp Lys Asp Ile Val Ala Glu Ala Glu Arg Leu Asp Val Lys Ala
            260                 265                 270
Met Gly Pro Leu Val Leu Thr Glu Val Leu Phe Asp Glu Lys Ile Arg
        275                 280                 285
Glu Gln Ile Lys Lys Tyr Arg Arg His Phe Leu Arg Phe Cys His Asn
    290                 295                 300
Asn Lys Lys Ala Gln Arg Tyr Leu Leu His Gly Leu Glu Cys Val Val
305                 310                 315                 320
Ala Met His Gln Ala Gln Leu Ile Ser Lys Ile Pro His Ile Leu Lys
                325                 330                 335
Glu Met Tyr Asp Ala Asp Leu Leu Glu Glu Glu Val Ile Ile Ser Trp
            340                 345                 350
Ser Glu Lys Ala Ser Lys Lys Tyr Val Ser Lys Glu Leu Ala Lys Glu
        355                 360                 365
Ile Arg Val Lys Ala Glu Pro Phe Ile Lys Trp Leu Lys Glu Ala Glu
    370                 375                 380
Glu Glu Ser Ser Gly Gly Glu Glu Glu Asp Glu Asp Glu Asn Ile Glu
385                 390                 395                 400
Val Val Tyr Ser Lys Thr Ala Ser Val Pro Lys Val Glu Thr Val Lys
                405                 410                 415
Ser Asp Asn Lys Asp Asp Asp Ile Asp Ile Asp Ala Ile
            420                 425
```

<210> 803
<211> 2251
<212> DNA
<213> Homo Sapiens

<400> 803

```
aggatgtctt ctggcaattt catataagta ttttttcaaa aatgtctctt ctgtcaaccc      60
cacgcctttg gcacaatgaa gtgggtaacc tttatttccc ttctttttct ctttagctcg     120
gcttattcca ggggtgtgtt tcgtcgagat gcacacaaga gtgaggttgc tcatcggttt     180
aaagatttgg gagaagaaaa tttcaaagcc ttggtgttga ttgcctttgc tcagtatctt     240
cagcagtgtc catttgaaga tcatgtaaaa ttagtgaatg aagtaactga atttgcaaaa     300
acatgtgtag ctgatgagtc agctgaaaat tgtgacaaat cacttcatac ccttttgga      360
gacaaattat gcacagttgc aactcttcgt gaaacctatg gtgaaatggc tgactgctgt     420
gcaaaacaag aacctgagag aaatgaatgc ttcttgcaac acaaagatga caacccaaac     480
ctcccccgat tggtgagacc agaggttgat gtgatgtgca ctgcttttca tgacaatgaa     540
gagacatttt tgaaaaaata cttatatgaa attgccagaa gacatcctta cttttatgcc     600
ccggaactcc ttttctttgc taaaaggtat aaagctgctt ttacagaatg ttgccaagct     660
gctgataaag ctgcctgcct gttgccaaag ctcgatgaac ttcgggatga agggaaggct     720
tcgtctgcca aacagagact caaatgtgcc agtctccaaa aatttggaga aagagctttc     780
aaagcatggg cagtggctcg cctgagccag agatttccca aagctgagtt tgcagaagtt     840
tccaagttag tgacagatct taccaaagtc cacacggaat gctgccatgg agatctgctt     900
```

```
gaatgtgctg atgacagggc ggaccttgcc aagtatatct gtgaaaatca ggattcgatc     960
tccagtaaac tgaaggaatg ctgtgaaaaa cctctgttgg aaaaatccca ctgcattgcc    1020
gaagtggaaa atgatgagat gcctgctgac ttgccttcat tagctgctga ttttgttgaa    1080
agtaaggatg tttgcaaaaa ctatgctgag gcaaaggatg tcttcctggg catgtttttg    1140
tatgaatatg caagaaggca tcctgattac tctgtcgtgc tgctgctgag acttgccaag    1200
acatatgaaa ccactctaga gaagtgctgt gccgctgcag atcctcatga atgctatgcc    1260
aaagtgttcg atgaatttaa acctcttgtg gaagagcctc agaatttaat caaacaaaac    1320
tgtgagcttt ttaagcagct tggagagtac aaattccaga atgcgctatt agttcgttac    1380
accaagaaag taccccaagt gtcaactcca actcttgtag aggtctcaag aaacctagga    1440
aaagtgggca gcaaatgttg taaacatcct gaagcaaaaa gaatgccctg tgcagaagac    1500
tatctatccg tggtcctgaa ccagttatgt gtgttgcatg agaaaacgcc agtaagtgac    1560
agagtcacaa aatgctgcac agagtccttg gtgaacaggc gaccatgctt ttcagctctg    1620
gaagtcgatg aaacatacgt tcccaaagag tttaatgctg aaacattcac cttccatgca    1680
gatatatgca cactttctga gaaggagaga caaatcaaga aacaaactgc acttgttgag    1740
cttgtgaaac acaagcccaa ggcaacaaaa gagcaactga aagctgttat ggatgatttc    1800
gcagcttttg tagagaagtg ctgcaaggct gacgataagg agacctgctt tgccgaggag    1860
ggtaaaaaac ttgttgctgc aagtcaagct gccttaggct tataacatct acatttaaaa    1920
gcatctcagc ctaccatgag aataagagaa agaaaatgaa gatcaaaagc ttattcatct    1980
gttttctttt tcgttggtgt aaagccaaca ccctgtctaa aaaacataaa tttctttaat    2040
cattttgcct cttttctctg tgcttcaatt aataaaaaat ggaaagaatc taatagagtg    2100
gtacagcact gttatttttc aaagatgtgt tgctatcctg aaaattctgt aggttctgtg    2160
gaagttccag tgttctctct tattccactt cggtagagga tttctagttt ctgtgggcta    2220
attaaataaa tcactaatac tcttctaagt t                                   2251
```

<210> 804
<211> 609
<212> PRT
<213> Homo Sapiens

<400> 804

```
Met Lys Trp Val Thr Phe Ile Ser Leu Leu Phe Leu Phe Ser Ser Ala
 1               5                  10                  15
Tyr Ser Arg Gly Val Phe Arg Arg Asp Ala His Lys Ser Glu Val Ala
            20                  25                  30
His Arg Phe Lys Asp Leu Gly Glu Glu Asn Phe Lys Ala Leu Val Leu
        35                  40                  45
Ile Ala Phe Ala Gln Tyr Leu Gln Gln Cys Pro Phe Glu Asp His Val
    50                  55                  60
Lys Leu Val Asn Glu Val Thr Glu Phe Ala Lys Thr Cys Val Ala Asp
65                  70                  75                  80
Glu Ser Ala Glu Asn Cys Asp Lys Ser Leu His Thr Leu Phe Gly Asp
                85                  90                  95
Lys Leu Cys Thr Val Ala Thr Leu Arg Glu Thr Tyr Gly Glu Met Ala
            100                 105                 110
Asp Cys Cys Ala Lys Gln Glu Pro Glu Arg Asn Glu Cys Phe Leu Gln
        115                 120                 125
His Lys Asp Asp Asn Pro Asn Leu Pro Arg Leu Val Arg Pro Glu Val
    130                 135                 140
Asp Val Met Cys Thr Ala Phe His Asp Asn Glu Glu Thr Phe Leu Lys
145                 150                 155                 160
Lys Tyr Leu Tyr Glu Ile Ala Arg Arg His Pro Tyr Phe Tyr Ala Pro
                165                 170                 175
Glu Leu Leu Phe Phe Ala Lys Arg Tyr Lys Ala Ala Phe Thr Glu Cys
            180                 185                 190
Cys Gln Ala Ala Asp Lys Ala Ala Cys Leu Leu Pro Lys Leu Asp Glu
```

```
        195                 200                 205
Leu Arg Asp Glu Gly Lys Ala Ser Ser Ala Lys Gln Arg Leu Lys Cys
    210                 215                 220
Ala Ser Leu Gln Lys Phe Gly Glu Arg Ala Phe Lys Ala Trp Ala Val
225                 230                 235                 240
Ala Arg Leu Ser Gln Arg Phe Pro Lys Ala Glu Phe Ala Glu Val Ser
                245                 250                 255
Lys Leu Val Thr Asp Leu Thr Lys Val His Thr Glu Cys Cys His Gly
            260                 265                 270
Asp Leu Leu Glu Cys Ala Asp Asp Arg Ala Asp Leu Ala Lys Tyr Ile
        275                 280                 285
Cys Glu Asn Gln Asp Ser Ile Ser Ser Lys Leu Lys Glu Cys Cys Glu
    290                 295                 300
Lys Pro Leu Leu Glu Lys Ser His Cys Ile Ala Glu Val Glu Asn Asp
305                 310                 315                 320
Glu Met Pro Ala Asp Leu Pro Ser Leu Ala Ala Asp Phe Val Glu Ser
                325                 330                 335
Lys Asp Val Cys Lys Asn Tyr Ala Glu Ala Lys Asp Val Phe Leu Gly
            340                 345                 350
Met Phe Leu Tyr Glu Tyr Ala Arg Arg His Pro Asp Tyr Ser Val Val
        355                 360                 365
Leu Leu Leu Arg Leu Ala Lys Thr Tyr Glu Thr Thr Leu Glu Lys Cys
    370                 375                 380
Cys Ala Ala Ala Asp Pro His Glu Cys Tyr Ala Lys Val Phe Asp Glu
385                 390                 395                 400
Phe Lys Pro Leu Val Glu Glu Pro Gln Asn Leu Ile Lys Gln Asn Cys
                405                 410                 415
Glu Leu Phe Lys Gln Leu Gly Glu Tyr Lys Phe Gln Asn Ala Leu Leu
            420                 425                 430
Val Arg Tyr Thr Lys Lys Val Pro Gln Val Ser Thr Pro Thr Leu Val
        435                 440                 445
Glu Val Ser Arg Asn Leu Gly Lys Val Gly Ser Lys Cys Cys Lys His
    450                 455                 460
Pro Glu Ala Lys Arg Met Pro Cys Ala Glu Asp Tyr Leu Ser Val Val
465                 470                 475                 480
Leu Asn Gln Leu Cys Val Leu His Glu Lys Thr Pro Val Ser Asp Arg
                485                 490                 495
Val Thr Lys Cys Cys Thr Glu Ser Leu Val Asn Arg Arg Pro Cys Phe
            500                 505                 510
Ser Ala Leu Glu Val Asp Glu Thr Tyr Val Pro Lys Glu Phe Asn Ala
        515                 520                 525
Glu Thr Phe Thr Phe His Ala Asp Ile Cys Thr Leu Ser Glu Lys Glu
    530                 535                 540
Arg Gln Ile Lys Lys Gln Thr Ala Leu Val Glu Leu Val Lys His Lys
545                 550                 555                 560
Pro Lys Ala Thr Lys Glu Gln Leu Lys Ala Val Met Asp Asp Phe Ala
                565                 570                 575
Ala Phe Val Glu Lys Cys Cys Lys Ala Asp Asp Lys Glu Thr Cys Phe
            580                 585                 590
Ala Glu Glu Gly Lys Lys Leu Val Ala Ala Ser Gln Ala Ala Leu Gly
        595                 600                 605
Leu
```

<210> 805

<211> 1356
<212> DNA
<213> Homo Sapiens

<400> 805
acaaacacca aggagtggag gtcagagtgt cacttttttg ttttcttttt gaaagatcat 60
tcgagaaaca cgtcactgat ctcccctgcg accatgtctt ccattaagat tgagtgtgtt 120
ttgccagaga actgccggtg tggtgagtct ccagtatggg aggaagtgtc caactctctg 180
ctctttgtag acattcctgc aaaaaaggtt tgccggtggg attcattcac caagcaagta 240
cagcgagtga ccatggatgc cccagtcagc tccgtggctc ttcgccagtc gggaggctat 300
gttgccacca ttggaacaaa gttctgtgct ttgaactgga aagaacaatc agcagttgtc 360
ttggccacgg tggataacga caagaaaaac aatcgcttca atgatgggaa ggtggatccc 420
gccgggaggt actttgctgg caccatggct gaggaaacag ctccagcagt tcttgagcgg 480
caccaggggg ccctgtactc cctctttcct gatcaccacg tgaaaaagta ctttgaccag 540
gtggacattt ccaatggttt ggattggtcg ctagaccaca aaatcttcta ttacattgac 600
agcctgtcct actccgtgga tgcctttgac tatgacctgc agacaggaca gatctccaac 660
cgcagaagtg tttacaagct agaaaaggaa gaacaaatcc cagatggaat gtgtattgat 720
gctgagggga agctctgggt ggcctgttac aatggaggaa gagtgattcg tttagatcct 780
gtgacaggga aaagacttca aactgtgaag ttgcctgttg ataaaacaac ttcatgctgc 840
tttggaggga agaattactc tgaaatgtat gtgacctgcg cccgggatgg gatggacccc 900
gagggtcttt tgaggcaacc tgaagctggt ggaattttca agataactgg tctgggggtc 960
aaaggaattg ctccctactc ctatgcggga tgaggacagg tcttctttcc tgccagaggg 1020
agctctgaag acaactagag aattctgggc ctgaaatttc aatctagtta gaaagaaaaa 1080
tgaggcaatg attttattaa cagcgttaag ttttaattta caacttttaa aaggcagagc 1140
atttttaaca aggggtgaca ggtggttttg ataacacact tataaggctt tctgtaaaag 1200
gtactataga agggcgaaga atcgttcaac tgtcaatcag cctcttgatt ctttgtaaat 1260
tgccagggtg ggtgggtaca tatctcttct tgattctgca tttcatactt aactatatta 1320
aagcttcaag gaacaataaa tagtaacctg gtaatg 1356

<210> 806
<211> 299
<212> PRT
<213> Homo Sapiens

<400> 806
Met Ser Ser Ile Lys Ile Glu Cys Val Leu Pro Glu Asn Cys Arg Cys
1 5 10 15
Gly Glu Ser Pro Val Trp Glu Glu Val Ser Asn Ser Leu Leu Phe Val
20 25 30
Asp Ile Pro Ala Lys Lys Val Cys Arg Trp Asp Ser Phe Thr Lys Gln
35 40 45
Val Gln Arg Val Thr Met Asp Ala Pro Val Ser Ser Val Ala Leu Arg
50 55 60
Gln Ser Gly Gly Tyr Val Ala Thr Ile Gly Thr Lys Phe Cys Ala Leu
65 70 75 80
Asn Trp Lys Glu Gln Ser Ala Val Val Leu Ala Thr Val Asp Asn Asp
85 90 95
Lys Lys Asn Asn Arg Phe Asn Asp Gly Lys Val Asp Pro Ala Gly Arg
100 105 110
Tyr Phe Ala Gly Thr Met Ala Glu Glu Thr Ala Pro Ala Val Leu Glu
115 120 125
Arg His Gln Gly Ala Leu Tyr Ser Leu Phe Pro Asp His His Val Lys
130 135 140
Lys Tyr Phe Asp Gln Val Asp Ile Ser Asn Gly Leu Asp Trp Ser Leu
145 150 155 160

```
Asp His Lys Ile Phe Tyr Tyr Ile Asp Ser Leu Ser Tyr Ser Val Asp
                165                 170                 175
Ala Phe Asp Tyr Asp Leu Gln Thr Gly Gln Ile Ser Asn Arg Arg Ser
            180                 185                 190
Val Tyr Lys Leu Glu Lys Glu Glu Gln Ile Pro Asp Gly Met Cys Ile
        195                 200                 205
Asp Ala Glu Gly Lys Leu Trp Val Ala Cys Tyr Asn Gly Gly Arg Val
    210                 215                 220
Ile Arg Leu Asp Pro Val Thr Gly Lys Arg Leu Gln Thr Val Lys Leu
225                 230                 235                 240
Pro Val Asp Lys Thr Thr Ser Cys Cys Phe Gly Gly Lys Asn Tyr Ser
                245                 250                 255
Glu Met Tyr Val Thr Cys Ala Arg Asp Gly Met Asp Pro Glu Gly Leu
            260                 265                 270
Leu Arg Gln Pro Glu Ala Gly Gly Ile Phe Lys Ile Thr Gly Leu Gly
        275                 280                 285
Val Lys Gly Ile Ala Pro Tyr Ser Tyr Ala Gly
    290                 295
```

<210> 807
<211> 1980
<212> DNA
<213> Homo Sapiens

<400> 807

```
atgccaagta gtttgctgct agcaaccaga aaccaaatcc tgtctatgat gaactgttgg      60
ttttcttgtg ctcccaagaa cagacatgca gcagattgga acaaatatga tgaccgattg     120
atgaaagccg cggagagggg agatgtagaa aaagtttcct caatccttgc taaaaagggc     180
atcaatccag gcaaactaga tgtggaaggc agatctgcct tccatgttgt ggcctcaaag     240
gggaatcttg aatgtttgaa tgccatcctt atacatggag ttgatattac aaccagtgac     300
actgcaggaa gaaatgctct tcacttggct gcaaagtatg ggcatgcatt gtgtctacaa     360
aaacttctac agtacaattg tcccactgaa catgcagacc tgcagggaag aaccgcactt     420
catgacgcag caatggcaga ctgtccttcc agcatacagc tgctttgtga ccatggggcc     480
tccgtgaatg ccaaagatgt ggatgggcgg acaccgctgg ttctggctac tcagatgtgt     540
aggccagcaa tctgtcaact gctgatagat cgaggggcag agattaattc cagagacaaa     600
caaaacagaa ctgctctcat gcttggttgc gagtatggtt gtaaggatgc tgtagaagtc     660
ttacttaaaa atggtgctga tgtaagcctg ctggatgcct tgggccatga tagttcttac     720
tatgcaagaa ttggtgacaa tctggacatt ctaactttat tgaagactgc gtcagaaaat     780
accaacaaag ggagagaact ttggaagaaa ggaccatctt tacagcagcg aaatttgccg     840
tacatgctag atgaagtaaa tgtgaagtca agtcagaggg agcatcgaaa cattcaggag     900
ctggagattg aaaatgaaga tttgaaagac aggttgagaa aaattcagca agaacagaga     960
atattactgg ataaagtcaa tggtttacaa ctacagctga atgaggaagt gatggttgct    1020
gatgatctgg aaagtgagaa agaaaagctg aagtctcttt tggtggctaa agaaaagcaa    1080
catgaagaaa gcctaagaac tattgagtct ctgaaaaaca gatttaaata ttttgagtgt    1140
acttccccag gggtgccagc ccacatgcaa agcaggtcta tgttaagacc actggagcta    1200
tcattaccca atcaaacctc atattctgaa aatgacctct taaagaaaga gttagaagca    1260
atgagaactt tctgcgaatc agccaaacaa gaccgcctca agctccagaa cggagtggcg    1320
cacaaggtgg ctgagtgcaa agctttagga ctagaatgtg aacgcatcaa ggaggactct    1380
gatgagcaga taaagcagtt agaagacgca ttgaaagatg tgcagaagag aatgtatgag    1440
tcggaaggta aagtaaaaca aatgcagaca cactttcttg cccttaaaga gcacctgacc    1500
agtgaagcag ctatagggaa tcacagacta atggaggagc tgaaggatca gttgaaggac    1560
atgaaagcga aatatgaggg tgcatcagca gaagtgggaa aactgcgaaa ccaaatcaaa    1620
caaaatgagc tgctagtaga acagtttagg agagatgaag gcaagctggt ggaagagaat    1680
aagcgattgc agaaggaact cagtatgtgt gaaacggagc gagacaagaa aggaaggagg    1740
gttgctgagg tggaaggcca ggtaaaggaa ctcttagcaa agctgacctt gtcagttcca    1800
```

actgaaaaat ttgagagcat gaagagctta ttatcaagcg aagtaaatga gaaggtgaaa 1860
aaaattggag agacagaaag agagtatgaa aaatcactta ctgaaatcag acagttaagg 1920
agagagcttg agaattgtaa gcgccaaact tcctcagcat gtcaagccag aggagcatga 1980

<210> 808
<211> 659
<212> PRT
<213> Homo Sapiens

<400> 808

```
Met Pro Ser Ser Leu Leu Leu Ala Thr Arg Asn Gln Ile Leu Ser Met
 1               5                  10                  15
Met Asn Cys Trp Phe Ser Cys Ala Pro Lys Asn Arg His Ala Ala Asp
            20                  25                  30
Trp Asn Lys Tyr Asp Asp Arg Leu Met Lys Ala Ala Glu Arg Gly Asp
        35                  40                  45
Val Glu Lys Val Ser Ser Ile Leu Ala Lys Lys Gly Ile Asn Pro Gly
    50                  55                  60
Lys Leu Asp Val Glu Gly Arg Ser Ala Phe His Val Val Ala Ser Lys
65                  70                  75                  80
Gly Asn Leu Glu Cys Leu Asn Ala Ile Leu Ile His Gly Val Asp Ile
                85                  90                  95
Thr Thr Ser Asp Thr Ala Gly Arg Asn Ala Leu His Leu Ala Ala Lys
            100                 105                 110
Tyr Gly His Ala Leu Cys Leu Gln Lys Leu Leu Gln Tyr Asn Cys Pro
        115                 120                 125
Thr Glu His Ala Asp Leu Gln Gly Arg Thr Ala Leu His Asp Ala Ala
    130                 135                 140
Met Ala Asp Cys Pro Ser Ser Ile Gln Leu Leu Cys Asp His Gly Ala
145                 150                 155                 160
Ser Val Asn Ala Lys Asp Val Asp Gly Arg Thr Pro Leu Val Leu Ala
                165                 170                 175
Thr Gln Met Cys Arg Pro Ala Ile Cys Gln Leu Leu Ile Asp Arg Gly
            180                 185                 190
Ala Glu Ile Asn Ser Arg Asp Lys Gln Asn Arg Thr Ala Leu Met Leu
        195                 200                 205
Gly Cys Glu Tyr Gly Cys Lys Asp Ala Val Glu Val Leu Leu Lys Asn
    210                 215                 220
Gly Ala Asp Val Ser Leu Leu Asp Ala Leu Gly His Asp Ser Ser Tyr
225                 230                 235                 240
Tyr Ala Arg Ile Gly Asp Asn Leu Asp Ile Leu Thr Leu Leu Lys Thr
                245                 250                 255
Ala Ser Glu Asn Thr Asn Lys Gly Arg Glu Leu Trp Lys Lys Gly Pro
            260                 265                 270
Ser Leu Gln Gln Arg Asn Leu Pro Tyr Met Leu Asp Glu Val Asn Val
        275                 280                 285
Lys Ser Ser Gln Arg Glu His Arg Asn Ile Gln Glu Leu Glu Ile Glu
    290                 295                 300
Asn Glu Asp Leu Lys Asp Arg Leu Arg Lys Ile Gln Gln Glu Gln Arg
305                 310                 315                 320
Ile Leu Leu Asp Lys Val Asn Gly Leu Gln Leu Gln Leu Asn Glu Glu
                325                 330                 335
Val Met Val Ala Asp Asp Leu Glu Ser Glu Lys Glu Lys Leu Lys Ser
            340                 345                 350
Leu Leu Val Ala Lys Glu Lys Gln His Glu Glu Ser Leu Arg Thr Ile
```

```
        355                 360                 365
Glu Ser Leu Lys Asn Arg Phe Lys Tyr Phe Glu Cys Thr Ser Pro Gly
    370                 375                 380
Val Pro Ala His Met Gln Ser Arg Ser Met Leu Arg Pro Leu Glu Leu
385                 390                 395                 400
Ser Leu Pro Asn Gln Thr Ser Tyr Ser Glu Asn Asp Leu Leu Lys Lys
                405                 410                 415
Glu Leu Glu Ala Met Arg Thr Phe Cys Glu Ser Ala Lys Gln Asp Arg
            420                 425                 430
Leu Lys Leu Gln Asn Gly Val Ala His Lys Val Ala Glu Cys Lys Ala
        435                 440                 445
Leu Gly Leu Glu Cys Glu Arg Ile Lys Glu Asp Ser Asp Glu Gln Ile
    450                 455                 460
Lys Gln Leu Glu Asp Ala Leu Lys Asp Val Gln Lys Arg Met Tyr Glu
465                 470                 475                 480
Ser Glu Gly Lys Val Lys Gln Met Gln Thr His Phe Leu Ala Leu Lys
                485                 490                 495
Glu His Leu Thr Ser Glu Ala Ala Ile Gly Asn His Arg Leu Met Glu
            500                 505                 510
Glu Leu Lys Asp Gln Leu Lys Asp Met Lys Ala Lys Tyr Glu Gly Ala
        515                 520                 525
Ser Ala Glu Val Gly Lys Leu Arg Asn Gln Ile Lys Gln Asn Glu Leu
    530                 535                 540
Leu Val Glu Gln Phe Arg Arg Asp Glu Gly Lys Leu Val Glu Glu Asn
545                 550                 555                 560
Lys Arg Leu Gln Lys Glu Leu Ser Met Cys Glu Thr Glu Arg Asp Lys
                565                 570                 575
Lys Gly Arg Arg Val Ala Glu Val Glu Gly Gln Val Lys Glu Leu Leu
            580                 585                 590
Ala Lys Leu Thr Leu Ser Val Pro Thr Glu Lys Phe Glu Ser Met Lys
        595                 600                 605
Ser Leu Leu Ser Ser Glu Val Asn Glu Lys Val Lys Lys Ile Gly Glu
    610                 615                 620
Thr Glu Arg Glu Tyr Glu Lys Ser Leu Thr Glu Ile Arg Gln Leu Arg
625                 630                 635                 640
Arg Glu Leu Glu Asn Cys Lys Arg Gln Thr Ser Ser Ala Cys Gln Ala
                645                 650                 655
Arg Gly Ala
```

<210> 809
<211> 1725
<212> DNA
<213> Homo Sapiens

<400> 809

```
tttctttgtt aagtcgttcc ctctacaaag gacttcctag tgggtgtgaa aggcagcggt      60
ggccacagag gcggcggaga gatggccttc agcggttccc aggctcccta cctgagtcca     120
gctgtccccc tttctgggac tattcaagga ggtctccagg acggacttca gatcactgtc     180
aatgggaccg ttctcagctc cagtggaacc aggtttgctg tgaactttca gactggcttc     240
agtggaaatg acattgcctt ccacttcaac cctcggtttg aagatggagg gtacgtggtg     300
tgcaacacga ggcagaacgg aagctggggg cccgaggaga ggaagacaca catgcctttc     360
cagaagggga tgccctttga cctctgcttc ctggtgcaga gctcagattt caaggtgatg     420
gtgaacggga tcctcttcgt gcagtacttc caccgcgtgc ccttccaccg tgtggacacc     480
atctccgtca atggctctgt gcagctgtcc tacatcagct tccagaaccc ccgcacagtc     540
```

```
cctgttcagc ctgccttctc cacggtgccg ttctcccagc ctgtctgttt cccacccagg     600
cccagggggc gcagacaaaa acctcccggc gtgtggcctg ccaacccggc tcccattacc     660
cagacagtca tccacacagt gcagagcgcc cctggacaga tgttctctac tcccgccatc     720
ccacctatga tgtaccccca ccccgcctat ccgatgcctt tcatcaccac cattctggga     780
gggctgtacc catccaagtc catcctcctg tcaggcactg tcctgcccag tgctcagagg     840
ttccacatca acctgtgctc tgggaaccac atcgccttcc acctgaaccc ccgttttgat     900
gagaatgctg tggtccgcaa cacccagatc gacaactcct gggggtctga ggagcgaagt     960
ctgccccgaa aaatgccctt cgtccgtggc cagagcttct cagtgtggat cttgtgtgaa    1020
gctcactgcc tcaaggtggc cgtggatggt cagcacctgt ttgaatacta ccatcgcctg    1080
aggaacctgc ccaccatcaa cagactggaa gtgggggggcg acatccagct gacccatgtg    1140
cagacatagg cggcttcctg gccctggggc cgggggctgg ggtgtggggc agtctgggtc    1200
ctctcatcat ccccacttcc caggcccagc ctttccaacc ctgcctggga tctgggcttt    1260
aatgcagagg ccatgtcctt gtctggtcct gcttctggct acagccaccc tggaacggag    1320
aaggcagctg acggggattg ccttcctcag ccgcagcagc acctggggct ccagctgctg    1380
gaatcctacc atcccaggag gcaggcacag ccagggagag gggaggagtg ggcagtgaag    1440
atgaagcccc atgctcagtc ccctcccatc ccccacgcag ctccacccca gtcccaagcc    1500
accagctgtc tgctcctggt gggaggtggc ctcctcagcc cctcctctct gacctttaac    1560
ctcactctca ccttgcaccg tgcaccaacc cttcaccccc cctggaaagc aggcctgatg    1620
gcttcccact ggcctccacc acctgaccag agtgttctct tcagaggact ggctcctttc    1680
ccagtgtcct taaaataaag aaatgaaaat gcttgttggc acatt                     1725
```

<210> 810
<211> 355
<212> PRT
<213> Homo Sapiens

<400> 810

```
Met Ala Phe Ser Gly Ser Gln Ala Pro Tyr Leu Ser Pro Ala Val Pro
 1               5                  10                  15
Phe Ser Gly Thr Ile Gln Gly Gly Leu Gln Asp Gly Leu Gln Ile Thr
            20                  25                  30
Val Asn Gly Thr Val Leu Ser Ser Ser Gly Thr Arg Phe Ala Val Asn
        35                  40                  45
Phe Gln Thr Gly Phe Ser Gly Asn Asp Ile Ala Phe His Phe Asn Pro
    50                  55                  60
Arg Phe Glu Asp Gly Gly Tyr Val Val Cys Asn Thr Arg Gln Asn Gly
65                  70                  75                  80
Ser Trp Gly Pro Glu Glu Arg Lys Thr His Met Pro Phe Gln Lys Gly
                85                  90                  95
Met Pro Phe Asp Leu Cys Phe Leu Val Gln Ser Ser Asp Phe Lys Val
            100                 105                 110
Met Val Asn Gly Ile Leu Phe Val Gln Tyr Phe His Arg Val Pro Phe
        115                 120                 125
His Arg Val Asp Thr Ile Ser Val Asn Gly Ser Val Gln Leu Ser Tyr
    130                 135                 140
Ile Ser Phe Gln Asn Pro Arg Thr Val Pro Val Gln Pro Ala Phe Ser
145                 150                 155                 160
Thr Val Pro Phe Ser Gln Pro Val Cys Phe Pro Pro Arg Pro Arg Gly
                165                 170                 175
Arg Arg Gln Lys Pro Pro Gly Val Trp Pro Ala Asn Pro Ala Pro Ile
            180                 185                 190
Thr Gln Thr Val Ile His Thr Val Gln Ser Ala Pro Gly Gln Met Phe
        195                 200                 205
Ser Thr Pro Ala Ile Pro Pro Met Met Tyr Pro His Pro Ala Tyr Pro
    210                 215                 220
```

```
Met Pro Phe Ile Thr Thr Ile Leu Gly Gly Leu Tyr Pro Ser Lys Ser
225                 230                 235                 240
Ile Leu Leu Ser Gly Thr Val Leu Pro Ser Ala Gln Arg Phe His Ile
                245                 250                 255
Asn Leu Cys Ser Gly Asn His Ile Ala Phe His Leu Asn Pro Arg Phe
            260                 265                 270
Asp Glu Asn Ala Val Val Arg Asn Thr Gln Ile Asp Asn Ser Trp Gly
        275                 280                 285
Ser Glu Glu Arg Ser Leu Pro Arg Lys Met Pro Phe Val Arg Gly Gln
    290                 295                 300
Ser Phe Ser Val Trp Ile Leu Cys Glu Ala His Cys Leu Lys Val Ala
305                 310                 315                 320
Val Asp Gly Gln His Leu Phe Glu Tyr Tyr His Arg Leu Arg Asn Leu
                325                 330                 335
Pro Thr Ile Asn Arg Leu Glu Val Gly Gly Asp Ile Gln Leu Thr His
            340                 345                 350
Val Gln Thr
        355
```

<210> 811
<211> 1022
<212> DNA
<213> Homo Sapiens

<400> 811

```
gcctgtgggt ctccattgcc cagcttttgc ctgcactctt gcctgctgcc ctgaccagag      60
tcatcatgtc tcttgagcag aagagtcagc actgcaagcc tgaggaaggc gttgaggccc     120
aagaagaggc cctgggcctg gtgggtgcac aggctcctac tactgaggag caggaggctg     180
ctgtctcctc ctcctctcct ctggtcctgg gcaccctgga gaaagtgcct gctgctgagt     240
cagcagatcc tccccagagt cctcagggag cctctgcctt acccactacc atcagcttca     300
cttgctggag gcaacccaat gagggttcca gcagccaaga agaggaggag gccagcacct     360
cgcctgacgc agagtccttg ttccgagaag cactcagtaa caaggtggat gagttggctc     420
attttctgct ccgcaagtat cgagccaagg agctggtcac aaaggcagaa atgctggaga     480
gagtcatcaa aaattacaag cgctgctttc ctgtgatctt cggcaaagcc tccgagtccc     540
tgaagatgat ctttggcatt gacgtgaagg aagtggaccc cgccagcaac acctacaccc     600
ttgtcacctg cctgggcctt tcctatgatg gcctgctggg taataatcag atctttccca     660
agacaggcct cctgataatc gtcctgggca caattgcaat ggagggcgac agcgcctctg     720
aggaggaaat ctgggaggag ctgggtgtga tgggggtgta tgatgggagg gagcacactg     780
tctatgggga gcccaggaaa ctgctcaccc aagattgggt gcaggaaaac tacctggagt     840
accggcaggt acccggcagt aatcctgcgc gctatgagtt cctgtggggt ccaagggctc     900
tggctgaaac cagctatgtg aaagtcctgg agcatgtggt cagggtcaat gcaagagttc     960
gcattgccta cccatccctg cgtgaagcag ctttgttaga ggaggaagag ggagtctgag    1020
ca                                                                   1022
```

<210> 812
<211> 317
<212> PRT
<213> Homo Sapiens

<400> 812

```
Met Ser Leu Glu Gln Lys Ser Gln His Cys Lys Pro Glu Glu Gly Val
 1               5                  10                  15
Glu Ala Gln Glu Glu Ala Leu Gly Leu Val Gly Ala Gln Ala Pro Thr
            20                  25                  30
Thr Glu Glu Gln Glu Ala Ala Val Ser Ser Ser Ser Pro Leu Val Leu
```

```
        35                  40                  45
Gly Thr Leu Glu Lys Val Pro Ala Ala Glu Ser Ala Asp Pro Pro Gln
    50                  55                  60
Ser Pro Gln Gly Ala Ser Ala Leu Pro Thr Thr Ile Ser Phe Thr Cys
65                  70                  75                  80
Trp Arg Gln Pro Asn Glu Gly Ser Ser Ser Gln Glu Glu Glu Glu Ala
                85                  90                  95
Ser Thr Ser Pro Asp Ala Glu Ser Leu Phe Arg Glu Ala Leu Ser Asn
            100                 105                 110
Lys Val Asp Glu Leu Ala His Phe Leu Leu Arg Lys Tyr Arg Ala Lys
        115                 120                 125
Glu Leu Val Thr Lys Ala Glu Met Leu Glu Arg Val Ile Lys Asn Tyr
    130                 135                 140
Lys Arg Cys Phe Pro Val Ile Phe Gly Lys Ala Ser Glu Ser Leu Lys
145                 150                 155                 160
Met Ile Phe Gly Ile Asp Val Lys Glu Val Asp Pro Ala Ser Asn Thr
                165                 170                 175
Tyr Thr Leu Val Thr Cys Leu Gly Leu Ser Tyr Asp Gly Leu Leu Gly
            180                 185                 190
Asn Asn Gln Ile Phe Pro Lys Thr Gly Leu Leu Ile Ile Val Leu Gly
        195                 200                 205
Thr Ile Ala Met Glu Gly Asp Ser Ala Ser Glu Glu Glu Ile Trp Glu
    210                 215                 220
Glu Leu Gly Val Met Gly Val Tyr Asp Gly Arg Glu His Thr Val Tyr
225                 230                 235                 240
Gly Glu Pro Arg Lys Leu Leu Thr Gln Asp Trp Val Gln Glu Asn Tyr
                245                 250                 255
Leu Glu Tyr Arg Gln Val Pro Gly Ser Asn Pro Ala Arg Tyr Glu Phe
            260                 265                 270
Leu Trp Gly Pro Arg Ala Leu Ala Glu Thr Ser Tyr Val Lys Val Leu
        275                 280                 285
Glu His Val Val Arg Val Asn Ala Arg Val Arg Ile Ala Tyr Pro Ser
    290                 295                 300
Leu Arg Glu Ala Ala Leu Leu Glu Glu Glu Glu Gly Val
305                 310                 315
```

<210> 813
<211> 5175
<212> DNA
<213> Homo Sapiens

<400> 813

```
gctgctgctg cagtgggaca ggtggcggcg accggcggcg tccgaggaga tttaatccag      60
agactgactt cactatagaa cccacagttg tatcaatggt tggggaaaga tagtggcaac     120
aggcaaagga gaaacagctc tgacatacaa agaaaatgag tatgctaaag ccaagtgggc     180
ttaaggcccc caccaagatc ctgaagcctg gaagcacagc tctgaagaca cctacggctg     240
ttgtagctcc agtagaaaaa accatatcca gtgaaaaagc atcaagcact ccatcatctg     300
agactcagga ggaatttgtg gatgactttc gagttgggga gcgagtttgg gtgaatggaa     360
ataagcctgg atttatccag tttcttggag aaacccagtt tgcaccaggc cagtgggctg     420
gaattgtttt agatgaaccc ataggcaaga acgatggttc ggtggcagga gttcggtatt     480
tccagtgtga acctttaaag ggcatattta cccgaccttc aaagttaaca aggaaggtgc     540
aagcagaaga tgaagctaat ggcctgcaga caacgcccgc ctcccgagct acttcaccgc     600
tgtgcacttc tacggccagc atggtgtctt cctccccctc caccccttca aacatccctc     660
agaaaccatc acagccagca gcaaaggaac cttcagctac gcctccgatc agcaacctta     720
caaaaactgc cagtgaatct atctccaacc tttcagaggc tggctcaatc aagaaaggag     780
```

```
aaagagagct caaaatcgga gacagagtat tggttggtgg cactaaggct ggtgtagtcc   840
ggtttcttgg ggagaccgac tttgccaagg gggagtggtg tggcgtggag ttagatgagc   900
cacttgggaa gaatgatggc gctgttgctg gaacaaggta ttttcagtgt caacccaaat   960
atggcttgtt cgctcctgtc cacaaagtta ccaagattgg cttcccttcc actacaccag  1020
ccaaagccaa ggccaacgca gtgaggcgag tgatggcgac cacgtccgcc agcctgaagc  1080
gcagcccttc tgcctcttcc ctcagctcca tgagctcagt ggcctcctct gtgagcagca  1140
ggcccagtcg gacaggacta ttgactgaaa cctcctcccg ttacgccagg aagatctccg  1200
gtaccactgc cctccaggag gccctgaagg agaagcagca gcacattgag cagctgctgg  1260
cggaacggga tctggagagg gcggaggtgg ccaaggccac gagccacgtg ggggagatag  1320
agcaggagct agctctggcc cgggacggac atgaccagca tgtcctggaa ttggaagcca  1380
aaatggacca gctgcgaaca atggtggaag ctgctgacag ggagaaggtg gagcttctca  1440
accagcttga agaggagaaa aggaaggttg aggaccttca gttccgggtt gaagaagaat  1500
caattaccaa aggtgatctt gaggtggcta cagtttcaga aaagtcacgt ataatggaac  1560
tggagaaaga cctagcattg agagtacagg aagtagctga gctccgaaga aggctagagt  1620
ccaataagcc tgctggggat gtggacatgt cactttccct tttgcaagag ataagctctt  1680
tgcaagaaaa gttagaagtc acccgtactg accaccagag agaaataact tctctgaagg  1740
agcattttgg agcccgggaa gaaactcatc agaaggagat aaaggctctg tataccgcca  1800
cggaaaagct ttccaaagag aacgagtcat tgaaaagcaa gctggagcat gccaacaaag  1860
agaactcaga tgtgatagct ctatggaagt ccaaactgga gactgccatc gcatcccacc  1920
agcaggcgat ggaagaactg aaggtatctt tcagcaaagg gcttggaaca gagacggcag  1980
aatttgctga actaaaaaca caaatagaga aaatgagact agattaccaa cacgaaatag  2040
aaaatttgca gaatcaacaa gactctgaac gggctgccca tgctaaagag atggaagcct  2100
tgagggctaa actgatgaaa gttattaaag aaaaggaaaa cagtctggaa gccatcaggt  2160
cgaaactgga caaagcagaa gaccagcatc tcgtagaaat ggaagacacg ttaaacaaat  2220
tacaggaagc tgaaataaag gtaaaggagc tagaggtact gcaagccaaa tgcaatgaac  2280
aaaccaaggt tattgataat tttacatcac agctcaaggc tactgaagaa aagctcttgg  2340
atcttgatgc acttcggaaa gccagttccg aaggtaaatc ggaaatgaag aaacttagac  2400
agcagcttga ggcagctgag aaacagatta aacatttaga gattgaaaag aatgctgaaa  2460
gtagcaaggc tagtagcatt accagagagc tccaggggag agagctaaag cttactaacc  2520
ttcaggaaaa tttgagtgaa gtcagtcaag tgaaagagac tttggaaaaa gaacttcaga  2580
ttttgaaaga aaagtttgct gaagcttcag aggaggcagt ctctgttcag agaagtatgc  2640
aagaaactgt aaataagtta caccaaaagg aggaacagtt taacatgctg tcttctgact  2700
tggagaagct gagagaaaac ttagcagata tggaggcaaa atttagagag aaagatgaga  2760
gagaagagca gctgataaag gcaaaggaaa aactggaaaa tgacattgca gaaataatga  2820
agatgtcagg agataactct tctcagctga caaaaatgaa cgatgaatta cgtctgaaag  2880
aaagagatgt agaagaatta cagctaaaac ttacaaaggc taatgaaaat gcaagttttc  2940
tgcaaaaaag tattgaggac atgactgtca aagctgaaca gagccagcaa gaagcagcta  3000
aaaagcatga ggaagaaaag aaagaattgg agaggaaatt gtcggacctg gaaaagaaaa  3060
tggaaacaag ccacaaccag tgtcaggagc tgaaagccag gtatgagaga gccacttctg  3120
agacaaaaac caagcatgaa gaaatcctac agaacctcca gaagacgctg ctggacacag  3180
aggacaagct gaagggcgca cgggaggaga acagtggctt gctgcaggag ctggaggagc  3240
tgagaaagca agccgagaaa gccaaagctg ctcaaacagc ggaagatgcc atgcagataa  3300
tggaacagat gaccaaagag aagactgaga ctctggcctc cttggaggac accaagcaaa  3360
caaatgcaaa actacagaat gaattggaca cacttaaaga aaacaacttg aaaaatgtgg  3420
aagagctgaa caaatcaaaa gaactcctga ctgtagagaa tcaaaaaatg gaagaattta  3480
ggaaagaaat agaaacccta aagcaggcag cagctcagaa gtcccagcag ctttcagcgt  3540
tgcaagaaga gaacgttaaa cttgctgagg agctggggag aagcagggac gaagtcacaa  3600
gtcatcaaaa gctggaagaa gaaagatctg tgctcaataa tcagttgtta gaaatgaaaa  3660
aaagagaatc caagttcata aaagacgcag atgaagagaa agcttccttg cagaaatcca  3720
tcagtataac tagtgcctta ctcacagaaa aggatgccga gctggagaaa ctgagaaatg  3780
aggtcacagt gctcagggga gaaaacgcct ctgccaagtc cttgcattca gttgttcaga  3840
ctctagagtc tgataaggtg aagctcgagc tcaaggtaaa gaacttggag cttcaactca  3900
aagaaaacaa gaggcagctc agcagctcct caggtaatac agacactcag gcagacgagg  3960
atgaaagagc ccaggagagt cagattgatt tcctaaattc agtaatagtg gaccttcaaa  4020
ggaagaatca agacctcaag atgaaggtgg agatgatgtc agaagcagcc ctgaatggga  4080
```

```
acggggatga cctaaacaat tatgacagtg atgatcagga gaaacagtcc aagaagaaac    4140
ctcgcctctt ctgtgacatt tgtgactgct ttgatctcca cgacacagag gattgtccta    4200
cccaggcaca gatgtcagag gaccctcccc attccacaca ccatggcagt cggggtgagg    4260
aacgcccata ctgtgaaatc tgtgagatgt ttggacactg ggccaccaac tgcaatgacg    4320
acgaaacctt ctgatgaagc ctccagtgga gaactgggct tgctcagacg cactcgcatt    4380
gacacaacgt aacaccagca ttgtgtgtgc agacttcagg agaactcatg ttatttttta    4440
accccgtcaa caaatctagg aaaatatttt gatcttcaac aaattgccct ttagtctccc    4500
cgtatgagtt agaataataa atatttagta ggtgagcttt tcacctcgaa ttttgttttc    4560
ttgattttta cgtttgaaga cattgcacca gatgcsatta catttattgg ccccccgacc    4620
ttgtagaaaa acccctaccc tcacaatacc ttatttaagt aactttaaat tatgccgtta    4680
cttttcatat ttgcactaag atatttccag gctgcatttg tatatttaga ttttttggtt    4740
aagctttgac actggaatga gttgaaaaaa tgtgccattt tgcattttca tctactcatt    4800
taaagtattt tattcttatt caaagaaata tctgagctct ttgcactacc tgttatcagt    4860
agtgccttta cttcaggctt gataatactt aggtgtgatt ataaaatcat gaagcaggta    4920
aagggagggg caagccccca aactgctgtg gggacatttt ataatctata tgctgcaccc    4980
acttaatcta ctgtggtgtt ttgtttatta gttttgcata atttcagctt ctatatattg    5040
tatgtatata ttttttaaaa atctatattt tgggaaaaaa acatacacaa tgtgtctttc    5100
tttttggaca tttacctttt tgaaaaagaa aacacttaaa atgatcatta ggacataaca    5160
gactagggaa ttccg                                                    5175
```

<210> 814
<211> 1392
<212> PRT
<213> Homo Sapiens

<400> 814

```
Met Ser Met Leu Lys Pro Ser Gly Leu Lys Ala Pro Thr Lys Ile Leu
 1               5                  10                  15
Lys Pro Gly Ser Thr Ala Leu Lys Thr Pro Thr Ala Val Val Ala Pro
            20                  25                  30
Val Glu Lys Thr Ile Ser Ser Glu Lys Ala Ser Ser Thr Pro Ser Ser
        35                  40                  45
Glu Thr Gln Glu Glu Phe Val Asp Asp Phe Arg Val Gly Glu Arg Val
    50                  55                  60
Trp Val Asn Gly Asn Lys Pro Gly Phe Ile Gln Phe Leu Gly Glu Thr
65                  70                  75                  80
Gln Phe Ala Pro Gly Gln Trp Ala Gly Ile Val Leu Asp Glu Pro Ile
                85                  90                  95
Gly Lys Asn Asp Gly Ser Val Ala Gly Val Arg Tyr Phe Gln Cys Glu
            100                 105                 110
Pro Leu Lys Gly Ile Phe Thr Arg Pro Ser Lys Leu Thr Arg Lys Val
        115                 120                 125
Gln Ala Glu Asp Glu Ala Asn Gly Leu Gln Thr Thr Pro Ala Ser Arg
    130                 135                 140
Ala Thr Ser Pro Leu Cys Thr Ser Thr Ala Ser Met Val Ser Ser Ser
145                 150                 155                 160
Pro Ser Thr Pro Ser Asn Ile Pro Gln Lys Pro Ser Gln Pro Ala Ala
                165                 170                 175
Lys Glu Pro Ser Ala Thr Pro Pro Ile Ser Asn Leu Thr Lys Thr Ala
            180                 185                 190
Ser Glu Ser Ile Ser Asn Leu Ser Glu Ala Gly Ser Ile Lys Lys Gly
        195                 200                 205
Glu Arg Glu Leu Lys Ile Gly Asp Arg Val Leu Val Gly Gly Thr Lys
```

```
    210                 215                 220
Ala Gly Val Val Arg Phe Leu Gly Glu Thr Asp Phe Ala Lys Gly Glu
225                 230                 235                 240
Trp Cys Gly Val Glu Leu Asp Glu Pro Leu Gly Lys Asn Asp Gly Ala
                245                 250                 255
Val Ala Gly Thr Arg Tyr Phe Gln Cys Gln Pro Lys Tyr Gly Leu Phe
            260                 265                 270
Ala Pro Val His Lys Val Thr Lys Ile Gly Phe Pro Ser Thr Thr Pro
        275                 280                 285
Ala Lys Ala Lys Ala Asn Ala Val Arg Arg Val Met Ala Thr Thr Ser
    290                 295                 300
Ala Ser Leu Lys Arg Ser Pro Ser Ala Ser Ser Leu Ser Ser Met Ser
305                 310                 315                 320
Ser Val Ala Ser Ser Val Ser Ser Arg Pro Ser Arg Thr Gly Leu Leu
                325                 330                 335
Thr Glu Thr Ser Ser Arg Tyr Ala Arg Lys Ile Ser Gly Thr Thr Ala
            340                 345                 350
Leu Gln Glu Ala Leu Lys Glu Lys Gln Gln His Ile Glu Gln Leu Leu
        355                 360                 365
Ala Glu Arg Asp Leu Glu Arg Ala Glu Val Ala Lys Ala Thr Ser His
    370                 375                 380
Val Gly Glu Ile Glu Gln Glu Leu Ala Leu Ala Arg Asp Gly His Asp
385                 390                 395                 400
Gln His Val Leu Glu Leu Glu Ala Lys Met Asp Gln Leu Arg Thr Met
                405                 410                 415
Val Glu Ala Ala Asp Arg Glu Lys Val Glu Leu Leu Asn Gln Leu Glu
            420                 425                 430
Glu Glu Lys Arg Lys Val Glu Asp Leu Gln Phe Arg Val Glu Glu Glu
        435                 440                 445
Ser Ile Thr Lys Gly Asp Leu Glu Val Ala Thr Val Ser Glu Lys Ser
    450                 455                 460
Arg Ile Met Glu Leu Glu Lys Asp Leu Ala Leu Arg Val Gln Glu Val
465                 470                 475                 480
Ala Glu Leu Arg Arg Arg Leu Glu Ser Asn Lys Pro Ala Gly Asp Val
                485                 490                 495
Asp Met Ser Leu Ser Leu Leu Gln Glu Ile Ser Ser Leu Gln Glu Lys
            500                 505                 510
Leu Glu Val Thr Arg Thr Asp His Gln Arg Glu Ile Thr Ser Leu Lys
        515                 520                 525
Glu His Phe Gly Ala Arg Glu Glu Thr His Gln Lys Glu Ile Lys Ala
    530                 535                 540
Leu Tyr Thr Ala Thr Glu Lys Leu Ser Lys Glu Asn Glu Ser Leu Lys
545                 550                 555                 560
Ser Lys Leu Glu His Ala Asn Lys Glu Asn Ser Asp Val Ile Ala Leu
                565                 570                 575
Trp Lys Ser Lys Leu Glu Thr Ala Ile Ala Ser His Gln Gln Ala Met
            580                 585                 590
Glu Glu Leu Lys Val Ser Phe Ser Lys Gly Leu Gly Thr Glu Thr Ala
        595                 600                 605
Glu Phe Ala Glu Leu Lys Thr Gln Ile Glu Lys Met Arg Leu Asp Tyr
    610                 615                 620
Gln His Glu Ile Glu Asn Leu Gln Asn Gln Gln Asp Ser Glu Arg Ala
625                 630                 635                 640
Ala His Ala Lys Glu Met Glu Ala Leu Arg Ala Lys Leu Met Lys Val
                645                 650                 655
```

```
Ile Lys Glu Lys Glu Asn Ser Leu Glu Ala Ile Arg Ser Lys Leu Asp
            660                 665                 670
Lys Ala Glu Asp Gln His Leu Val Glu Met Glu Asp Thr Leu Asn Lys
        675                 680                 685
Leu Gln Glu Ala Glu Ile Lys Val Lys Glu Leu Glu Val Leu Gln Ala
    690                 695                 700
Lys Cys Asn Glu Gln Thr Lys Val Ile Asp Asn Phe Thr Ser Gln Leu
705                 710                 715                 720
Lys Ala Thr Glu Glu Lys Leu Leu Asp Leu Asp Ala Leu Arg Lys Ala
                725                 730                 735
Ser Ser Glu Gly Lys Ser Glu Met Lys Lys Leu Arg Gln Gln Leu Glu
            740                 745                 750
Ala Ala Glu Lys Gln Ile Lys His Leu Glu Ile Glu Lys Asn Ala Glu
        755                 760                 765
Ser Ser Lys Ala Ser Ser Ile Thr Arg Glu Leu Gln Gly Arg Glu Leu
    770                 775                 780
Lys Leu Thr Asn Leu Gln Glu Asn Leu Ser Glu Val Ser Gln Val Lys
785                 790                 795                 800
Glu Thr Leu Glu Lys Glu Leu Gln Ile Leu Lys Glu Lys Phe Ala Glu
                805                 810                 815
Ala Ser Glu Glu Ala Val Ser Val Gln Arg Ser Met Gln Glu Thr Val
            820                 825                 830
Asn Lys Leu His Gln Lys Glu Glu Gln Phe Asn Met Leu Ser Ser Asp
        835                 840                 845
Leu Glu Lys Leu Arg Glu Asn Leu Ala Asp Met Glu Ala Lys Phe Arg
    850                 855                 860
Glu Lys Asp Glu Arg Glu Glu Gln Leu Ile Lys Ala Lys Glu Lys Leu
865                 870                 875                 880
Glu Asn Asp Ile Ala Glu Ile Met Lys Met Ser Gly Asp Asn Ser Ser
                885                 890                 895
Gln Leu Thr Lys Met Asn Asp Glu Leu Arg Leu Lys Glu Arg Asp Val
            900                 905                 910
Glu Glu Leu Gln Leu Lys Leu Thr Lys Ala Asn Glu Asn Ala Ser Phe
        915                 920                 925
Leu Gln Lys Ser Ile Glu Asp Met Thr Val Lys Ala Glu Gln Ser Gln
    930                 935                 940
Gln Glu Ala Ala Lys Lys His Glu Glu Glu Lys Lys Glu Leu Glu Arg
945                 950                 955                 960
Lys Leu Ser Asp Leu Glu Lys Lys Met Glu Thr Ser His Asn Gln Cys
                965                 970                 975
Gln Glu Leu Lys Ala Arg Tyr Glu Arg Ala Thr Ser Glu Thr Lys Thr
            980                 985                 990
Lys His Glu Glu Ile Leu Gln Asn Leu Gln Lys Thr Leu Leu Asp Thr
        995                 1000                1005
Glu Asp Lys Leu Lys Gly Ala Arg Glu Glu Asn Ser Gly Leu Leu Gln
    1010                1015                1020
Glu Leu Glu Glu Leu Arg Lys Gln Ala Glu Lys Ala Lys Ala Ala Gln
1025                1030                1035                104
Thr Ala Glu Asp Ala Met Gln Ile Met Glu Gln Met Thr Lys Glu Lys
                1045                1050                1055
Thr Glu Thr Leu Ala Ser Leu Glu Asp Thr Lys Gln Thr Asn Ala Lys
            1060                1065                1070
Leu Gln Asn Glu Leu Asp Thr Leu Lys Glu Asn Asn Leu Lys Asn Val
        1075                1080                1085
Glu Glu Leu Asn Lys Ser Lys Glu Leu Leu Thr Val Glu Asn Gln Lys
```

```
    1090                1095                1100
Met Glu Glu Phe Arg Lys Glu Ile Glu Thr Leu Lys Gln Ala Ala Ala
1105                1110                1115                112
Gln Lys Ser Gln Gln Leu Ser Ala Leu Gln Glu Glu Asn Val Lys Leu
                1125                1130                1135
Ala Glu Glu Leu Gly Arg Ser Arg Asp Glu Val Thr Ser His Gln Lys
            1140                1145                1150
Leu Glu Glu Glu Arg Ser Val Leu Asn Asn Gln Leu Leu Glu Met Lys
        1155                1160                1165
Lys Arg Glu Ser Lys Phe Ile Lys Asp Ala Asp Glu Glu Lys Ala Ser
    1170                1175                1180
Leu Gln Lys Ser Ile Ser Ile Thr Ser Ala Leu Leu Thr Glu Lys Asp
1185                1190                1195                120
Ala Glu Leu Glu Lys Leu Arg Asn Glu Val Thr Val Leu Arg Gly Glu
                1205                1210                1215
Asn Ala Ser Ala Lys Ser Leu His Ser Val Val Gln Thr Leu Glu Ser
            1220                1225                1230
Asp Lys Val Lys Leu Glu Leu Lys Val Lys Asn Leu Glu Leu Gln Leu
        1235                1240                1245
Lys Glu Asn Lys Arg Gln Leu Ser Ser Ser Ser Gly Asn Thr Asp Thr
    1250                1255                1260
Gln Ala Asp Glu Asp Glu Arg Ala Gln Glu Ser Gln Ile Asp Phe Leu
1265                1270                1275                128
Asn Ser Val Ile Val Asp Leu Gln Arg Lys Asn Gln Asp Leu Lys Met
                1285                1290                1295
Lys Val Glu Met Met Ser Glu Ala Ala Leu Asn Gly Asn Gly Asp Asp
            1300                1305                1310
Leu Asn Asn Tyr Asp Ser Asp Asp Gln Glu Lys Gln Ser Lys Lys Lys
        1315                1320                1325
Pro Arg Leu Phe Cys Asp Ile Cys Asp Cys Phe Asp Leu His Asp Thr
    1330                1335                1340
Glu Asp Cys Pro Thr Gln Ala Gln Met Ser Glu Asp Pro Pro His Ser
1345                1350                1355                136
Thr His His Gly Ser Arg Gly Glu Glu Arg Pro Tyr Cys Glu Ile Cys
                1365                1370                1375
Glu Met Phe Gly His Trp Ala Thr Asn Cys Asn Asp Asp Glu Thr Phe
            1380                1385                1390
```

<210> 815
<211> 647
<212> DNA
<213> Homo Sapiens

<400> 815

```
ccacgcgtcc gcctcccgtt ccctcttccg cttgcgctgc cgcaggacca tggccaacct      60
ggagcgcacc ttcatcgcca tcaagccgga cggcgtgcag cgcggcctgg tgggcgagat     120
catcaagcgc ttcgagcaga agggattccg cctcgtggcc atgaagttcc tccgggcctc     180
tgaagaacac ctgaagcagc actacattga cctgaaagac cgaccattct tccctgggct     240
ggtgaagtac atgaactcag ggccggttgt ggccatggtc tgggaggggc tgaacgtggt     300
gaagacaggc cgagtgatgc ttggggagac caatccagca gattcaaagc caggcaccat     360
tcgtggggac ttctgcattc aggttggcag gaacatcatt catggcagtg attcagtaaa     420
aagtgctgaa aaagaaatca gcctatggtt taagcctgaa gaactggttg actacaagtc     480
ttgtgctcat gactgggtct atgaataaga ggtggacaca acagcagtct ccttcagcac     540
ggcgtggtgt gtccctggac acagctcttc attccattga cttagaggca acaggattga     600
tcattctttt atagagcata tttgccaata aagcttttgg aagccgg                   647
```

<210> 816
<211> 152
<212> PRT
<213> Homo Sapiens

<400> 816

```
Met Ala Asn Leu Glu Arg Thr Phe Ile Ala Ile Lys Pro Asp Gly Val
 1               5                  10                  15
Gln Arg Gly Leu Val Gly Glu Ile Ile Lys Arg Phe Glu Gln Lys Gly
            20                  25                  30
Phe Arg Leu Val Ala Met Lys Phe Leu Arg Ala Ser Glu Glu His Leu
        35                  40                  45
Lys Gln His Tyr Ile Asp Leu Lys Asp Arg Pro Phe Phe Pro Gly Leu
    50                  55                  60
Val Lys Tyr Met Asn Ser Gly Pro Val Val Ala Met Val Trp Glu Gly
65                  70                  75                  80
Leu Asn Val Val Lys Thr Gly Arg Val Met Leu Gly Glu Thr Asn Pro
                85                  90                  95
Ala Asp Ser Lys Pro Gly Thr Ile Arg Gly Asp Phe Cys Ile Gln Val
            100                 105                 110
Gly Arg Asn Ile Ile His Gly Ser Asp Ser Val Lys Ser Ala Glu Lys
        115                 120                 125
Glu Ile Ser Leu Trp Phe Lys Pro Glu Glu Leu Val Asp Tyr Lys Ser
    130                 135                 140
Cys Ala His Asp Trp Val Tyr Glu
145                 150
```